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FILE 'CASREACT' ENTERED AT 14:08:06 ON 13 AUG 2008
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FILE CONTENT:1840 - 11 Aug 2008 VOL 149 ISS 7

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* * CASREACT now has more than 15.3 million reactions * *
* *****

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(FILE 'HOME' ENTERED AT 14:03:34 ON 13 AUG 2008)

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ACT J086C1R/A

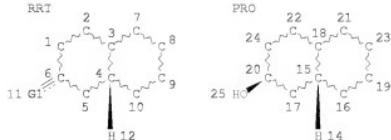
L1 STR
L2 SCR 1841
L3 973 SEA FILE=CASREACT SSS FUL L1 AND L2 (6405 REACTIONS)

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L4 7244 OC4-C5-OC5-C6-C6/ES

FILE 'CASREACT' ENTERED AT 14:05:18 ON 13 AUG 2008
L5 58 L3 AND L4
L6 38 L5 AND (PD<-20021028 OR AD<-20021028 OR PRD<-20021028)

FILE 'CASREACT' ENTERED AT 14:08:06 ON 13 AUG 2008

=> d que sta 13
L1 STR



VAR G1=O/S
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ELEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 24

STEREO ATTRIBUTES:

STEREO DEFAULT RELATIVE

NUMBER OF CHIRAL CENTERS IS 3

L2 SCR 1841

L3 973 SEA FILE-CASREACT SSS FUL L1 AND L2 (6405 REACTIONS)

99.1% DONE 1000000 VERIFIED 6405 HIT RXNS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.43

973 DOCS

FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**

BATCH **COMPLETE**

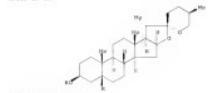
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PROJECTED ANSWERS: 973 TO 1134

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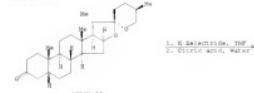
14 ANSWER 1 OF 38 CADENATE CONFIDENTIAL 2208 ACB on STM (Continued)

R2(4) OF 10



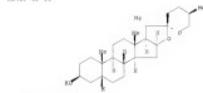
NOTE: Nitrogen atm.
COP: EtOH(1): P2 mixture, -10 deg C
S2M(2): 0 deg C

R2(5) OF 10



(Step 11)

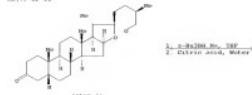
R2(6) OF 10



NOTE: Nitrogen atm.
COP: EtOH(1): P2 mixture, -10 deg C
S2M(2): 0 deg C

14 ANSWER 1 OF 38 CADENATE CONFIDENTIAL 2208 ACB on STM (Continued)

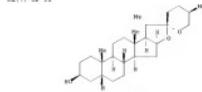
R2(7) OF 10



1. D-PABAOMe, THF
2. Cu(OAc)2, Water

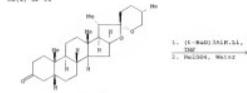
(Step 11)

R2(7) OF 10



COP: EtOH(1): P2 mixture, -10 deg C
S2M(2): 0 deg C

R2(8) OF 10

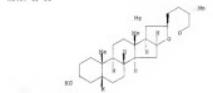


1. (1-Me)DAH, Li+
2. H2OAc, Water

(Step 11)

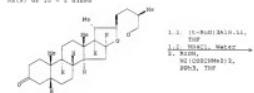
14 ANSWER 1 OF 38 CADENATE CONFIDENTIAL 2208 ACB on STM (Continued)

R2(8) OF 10

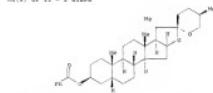


NOTE: Nitrogen atm.
COP: EtOH(1): P2 mixture, -10 deg C

R2(8) OF 10 - 2 STEPS



R2(8) OF 10 - 2 STEPS

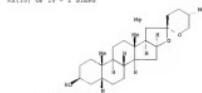


COP: EtOH(1) 2 hours, 10 deg C → room temperature

S2M(2) 1 hour, room temperature

14 ANSWER 1 OF 38 CADENATE CONFIDENTIAL 2208 ACB on STM (Continued)

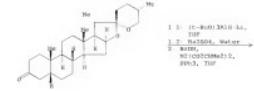
R2(10) OF 10 - 2 STEPS



NOTE: Nitrogen atm.
COP: EtOH(1): P2 mixture, -23 → -38 deg C

S2M(2) 1 hour, room temperature

R2(10) OF 10 - 2 STEPS



1. 1. (1-Me)DAH, Li+

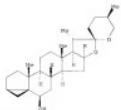
2. H2OAc, Water

EtOH(1): P2 mixture, -23 → -38 deg C

THF

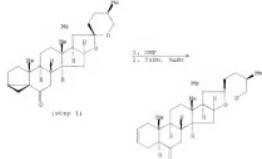
SA: ANSWER 1 OF 38 CADREACT CONFIDENTIAL 2108 ACS vs STM (Continued)

R2(4) OF 38



QIN: 3 hours, reflux

R2(4) OF 38



QIN: STEP(1) room temperature

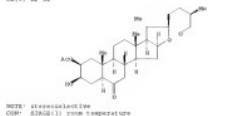
STEP(2) room temperature; 3 hours, reflux

SA: ANSWER 2 OF 38 CADREACT CONFIDENTIAL 2108 ACS vs STM (Continued)

R2(5) OF 38



R2(5) OF 38

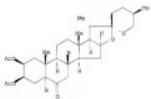
NOTE: stereoselective
COP: STEP(1.1) room temperature
STEP(1.2) room temperature

R2(6) OF 38

1. *Picoline*

SA: ANSWER 2 OF 38 CADREACT CONFIDENTIAL 2108 ACS vs STM (Continued)

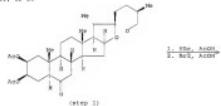
R2(11) OF 38



QIN: STEP(1) room temperature

STEP(2) 24 hours, room temperature

R2(11) OF 38



R2(11) OF 38



NOTE: key step stereoselective

COP: STEP(1) room temperature

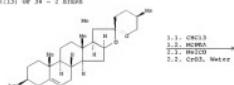
STEP(2) room temperature; 3 hours, 10 deg C

SA: ANSWER 2 OF 38 CADREACT CONFIDENTIAL 2108 ACS vs STM (Continued)

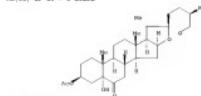
R2(12) OF 38 - 2 STEPS

NOTE: STEP(1.1) room temperature
STEP(1.2) 24 hours, room temperature
STEP(2.1) 30 minutes, room temperature

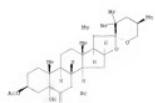
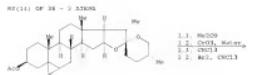
R2(13) OF 38 - 2 STEPS



R2(13) OF 38 - 2 STEPS

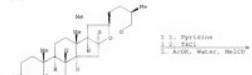
NOTE: 2. stereoselective
COP: STEP(1) room temperature
STEP(1.2) 10 minutes, room temperature
STEP(2) room temperature
STEP(2.1) reflux

SA ANSWER 1 OF 10 CADNACT COPYRIGHT 2000 ACS on S7W (Continued)



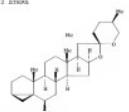
NOTE: 1. Stereoselective. 2. key step, stereoselective
DSR: STDP(1): 1. room temperature
STDP(1): 2. room temperature
STDP(1): 3. room temperature
STDP(2): 1. room, room temperature

RR(15) OF 38 - 2 ATOMS



SA ANSWER 2 OF 10 CADNACT COPYRIGHT 2000 ACS on S7W (Continued)

RR(15) OF 38 - 2 ATOMS



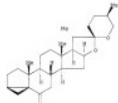
CW: STDP(1): 1) room temperature
STDP(1): 2) room temperature
STDP(2): 3 hours, reflux

RR(16) OF 38 - 2 ATOMS



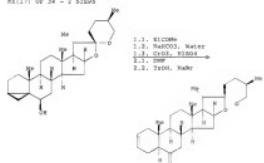
SA ANSWER 2 OF 38 CADNACT COPYRIGHT 2000 ACS on S7W (Continued)

RR(16) OF 38 - 2 ATOMS



DSR: STDP(1): 20 hours, reflux
STDP(1): 2. room temperature
STDP(1): 3. room temperature; 4 hours, reflux → 4 deg C
STDP(2): 3 hours, 5 deg C

RR(17) OF 38 - 2 ATOMS



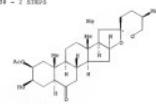
DSR: STDP(1): 2 room temperature
STDP(1): 2 room temperature; 5 hours, reflux, reflux → 5 deg C
STDP(1): 2 room temperature
STDP(1): 2 room temperature; 3 hours, reflux

SA ANSWER 2 OF 38 CADNACT COPYRIGHT 2000 ACS on S7W (Continued)

RR(18) OF 38 - 2 ATOMS

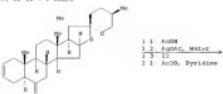


RR(18) OF 38 - 2 ATOMS



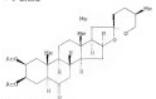
NOTE: 1. Stereoselective
DSR: STDP(1): 1. room temperature
STDP(1): 2. room temperature; 3 hours, reflux
STDP(2): 1. 15 minutes, room temperature
STDP(2): 2. room temperature; 2 hours, 50 - 60 deg C

RR(19) OF 38 - 2 ATOMS



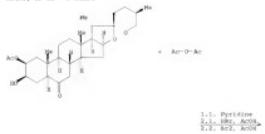
1A ANSWER 1 OF 38 CADREACT COPRIGHT 2608 ACB on STM (Continued)

NS(121) OF 38 - 2 STEPS

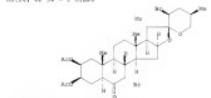


NOTE: 11 stereoselective
C20: 1.1 Pyridine
1.2. Ac2O, AcOH
1.3. H2O, AcOH
1.4. H2O, AcOH
1.5. H2O, AcOH
1.6. H2O, AcOH

NS(121) OF 38 - 3 STEPS



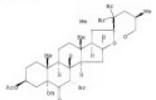
NS(121) OF 38 - 2 STEPS



NOTE: 11 key step, stereoselective
C20: 1.1 room temperature
1.2. Ac2O, AcOH
1.3. H2O, AcOH
1.4. H2O, AcOH
1.5. H2O, AcOH

1A ANSWER 2 OF 38 CADREACT COPRIGHT 2608 ACB on STM (Continued)

NS(121) OF 38 - 2 STEPS



NOTE: 11 stereoselective
C20: 1.1 room temperature
1.2. Ac2O, AcOH
1.3. H2O, AcOH
1.4. H2O, AcOH
1.5. H2O, AcOH
1.6. H2O, AcOH

NS(121) OF 38 - 4 STEPS



1.1. Pyridine
1.2. Ac2O, AcOH
1.3. H2O, AcOH
1.4. H2O, AcOH
1.5. H2O, AcOH
1.6. H2O, AcOH

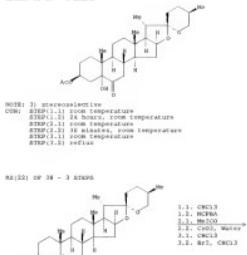
1A ANSWER 2 OF 38 CADREACT COPRIGHT 2608 ACB on STM (Continued)

NS(121) OF 38 - 3 STEPS



1.1. Pyridine
1.2. Ac2O, AcOH
1.3. H2O, AcOH
1.4. H2O, AcOH

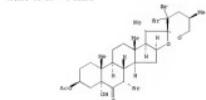
NS(121) OF 38 - 3 STEPS



1.1. CHCl3
1.2. NaBH4
1.3. H2O, AcOH
1.4. H2O, AcOH

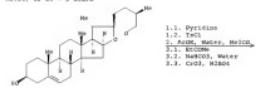
1A ANSWER 2 OF 38 CADREACT COPRIGHT 2608 ACB on STM (Continued)

NS(121) OF 38 - 4 STEPS



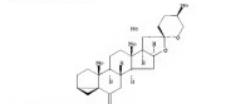
NOTE: 11 stereoselective, 11 key step, stereoselective
C20: 1.1 room temperature
1.2. Ac2O, AcOH
1.3. H2O, AcOH
1.4. H2O, AcOH
1.5. H2O, AcOH
1.6. H2O, AcOH

NS(124) OF 38 - 3 STEPS



1.1. Pyridine
1.2. Ac2O, AcOH
1.3. H2O, AcOH
1.4. H2O, AcOH

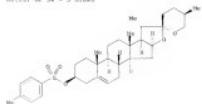
NS(124) OF 38 - 3 STEPS



NOTE: 110(1-1) room temperature
110(1-2) 3 hours, reflux, 5 deg C
110(1-3) room temperature
110(1-4) 3 hours, reflux
110(1-5) 3 hours, 5 deg C

1A. ANSWER 1 OF 10 CADREACT COPYRIGHT 2008 ACS vs STM (Continued)

RS(15) OF 3A - 3 STEPS



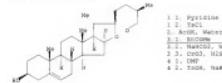
1. AcOH, Water, MeCO
2. LiCl, NaBH₄, MeOH
3. LiAlD₄, THF
4. LiCl, Et₂O
5. LiCl, THF

RS(15) OF 3A - 3 STEPS



- Q3B: STEP(1): 20 hours, reflux
STEP(2): 1) room temperature
2) LiCl, NaBH₄, MeOH; 5 hours, reflux; 5 deg C
STEP(3): 1) 3 hours, 5 deg C
STEP(4): room temperature; 3 hours, reflux

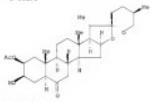
RS(14) OF 3A - 4 STEPS



1. Pyridine
2. HCl
3. AcOH, Water, MeCO
4. LiCl, THF
5. LiCl, Et₂O
6. LiCl, THF

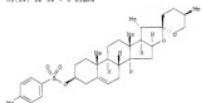
1A. ANSWER 1 OF 10 CADREACT COPYRIGHT 2008 ACS vs STM (Continued)

RS(17) OF 3A - 3 STEPS



- NOTE: 3) acetoxyselective
Q3B: STEP(1): 1) room temperature
2) LiCl, NaBH₄, MeOH; 5 hours, reflux; 5 deg C
STEP(2): 1) room temperature
2) LiCl, NaBH₄, MeOH; 3 hours, reflux
STEP(3): 1) room temperature
2) LiCl, NaBH₄, MeOH; 3 hours, 50 - 60 deg C

RS(18) OF 3A - 4 STEPS



1. AcOH, Water, MeCO
2. LiCl, NaBH₄, MeOH
3. LiAlD₄, THF
4. LiCl, Et₂O
5. LiCl, THF

1A. ANSWER 1 OF 10 CADREACT COPYRIGHT 2008 ACS vs STM (Continued)

RS(18) OF 3B - 4 STEPS



- COP: STEP(1): 1) room temperature
2) LiCl, NaBH₄, MeOH
3) LiAlD₄, THF
4) LiCl, Et₂O
5) LiCl, THF
6) LiCl, Et₂O
7) LiCl, THF

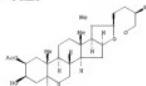
RS(17) OF 3B - 3 STEPS



- 1.1. Et₃SiCl, MeOH
1.2. NaBH₄, MeOH
1.3. LiCl, Et₂O
1.4. LiCl, Et₂O
1.5. LiCl, THF
1.6. LiCl, Et₂O
1.7. LiCl, THF

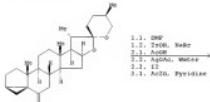
1A. ANSWER 1 OF 10 CADREACT COPYRIGHT 2008 ACS vs STM (Continued)

RS(18) OF 3B - 3 STEPS



- NOTE: 4) acetoxyselective
COP: STEP(1): 20 hours, reflux
STEP(2): 1) room temperature
2) LiCl, NaBH₄, MeOH; 5 hours, reflux; 5 deg C
STEP(3): 1) 3 hours, 5 deg C
STEP(4): 1) room temperature; 2 hours, reflux
STEP(5): 1) 15 minutes, room temperature
STEP(6): 1) room temperature; 2 hours, 50 - 60 deg C

RS(19) OF 3B - 3 STEPS



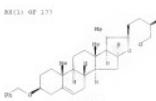
- 1.1. DMF
1.2. TGA, Water
1.3. AcOH
1.4. LiCl, Water
1.5. AcOH, Pyridine

RS(20) OF 3B - 3 STEPS



- NOTE: 5) acetoxyselective
COP: STEP(1): room temperature
STEP(2): 1) room temperature; 3 hours, reflux
2) LiCl, NaBH₄, MeOH; 18 minutes, room temperature
3) LiCl, NaBH₄, MeOH; 18 minutes, 50 - 60 deg C
STEP(4): 1) room temperature; 14 hours, room temperature

16 ANDREW J DE JEROME CASSARACT COPYRIGHT 2000 AACR OR BRS
17 138:09916 CASRACT
18 Glycosyl Trifluoroacetimidates. 2. Synthesis of Dioscin and Kiebel Saponin

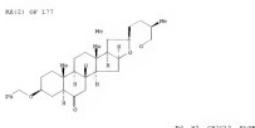


3. 8003-Me25, 2148
2. 16408, 14200, Waukesha
3. 16422, 16474C
4. Hartline's manganese
16212

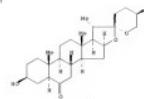


REAGENTS AND CONDITIONS:

COM: *Strecker*(+) 22 hours, room temperature
Strecker(-) 22 hours, room temperature
Strecker(+) overnight, room temperature; pH 7
Strecker(-) overnight, room temperature; pH 7



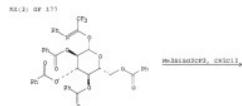
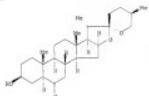
卷之三



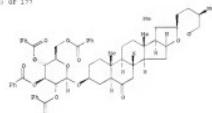
NOTE: stereoselective
CON: 100s temperature

16 ANSWER 3 OF 38 CASINACT COPYRIGHT 2009 AOS on STM (Continued)

JRC 127



WAD 08-127

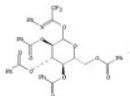


624

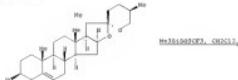
NOTE: ST004080142154
OBJ: 2006-100000000000

14 ANSWER 3 OF 38 CAGNEYACT COPYRIGHT 2008 ACS OR STB (CONTINUED)

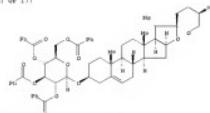
ISSN 0837-0893



卷五(4) 447-177



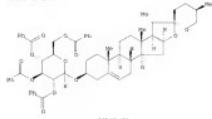
卷之三



more stereoselective, mol sieves used

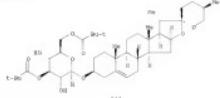
1A ANSWER 3 OF 38 CADREACT CONFIDENTIAL 2608 ACB vs STM (Continued)

RS(5) OF 171



1. NaBH_4 , MeOH
2. Pb(OAc)_4 , CHCl_3 , CH_2Cl_2

RS(8) OF 171

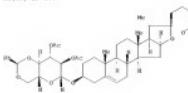


NOTE: stereoselectivity
RS(8) OF 171: cold temperature
RS(8) OF 171: \rightarrow reg. C

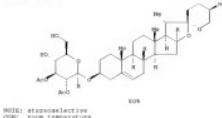
RS(10) OF 171 - REACTION DIAGRAM NOT AVAILABLE
RS(11) OF 171 - REACTION DIAGRAM NOT AVAILABLE

1A ANSWER 3 OF 38 CADREACT CONFIDENTIAL 2608 ACB vs STM (Continued)

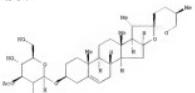
RS(12) OF 171

 Ti(OBu)_4 , H_2O , CHCl_3

RS(13) OF 171



RS(13) OF 171

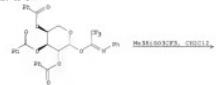


NOTE: stereoselectivity
RS(13) OF 171: cold temperature
RS(13) OF 171: \rightarrow reg. C

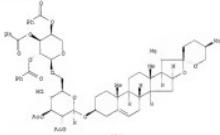
RS(14) OF 171 - REACTION DIAGRAM NOT AVAILABLE
RS(15) OF 171 - REACTION DIAGRAM NOT AVAILABLE

1A ANSWER 3 OF 38 CADREACT CONFIDENTIAL 2608 ACB vs STM (Continued)

RS(12) OF 177



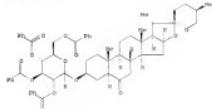
RS(13) OF 177



NOTE: stereoselective, not stereo used
COP^t: \rightarrow cold temperature, reg. C

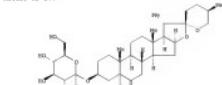
RS(14) OF 177 - REACTION DIAGRAM NOT AVAILABLE

RS(15) OF 177

 NaBH_4 , CHCl_3 , NaBH_4

1A ANSWER 3 OF 38 CADREACT CONFIDENTIAL 2608 ACB vs STM (Continued)

RS(13) OF 177



NOTE: stereoselective
COP^t: RS(13): 1 hour, room temperature; pH 7

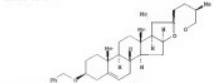
RS(14) OF 177 - REACTION DIAGRAM NOT AVAILABLE

RS(15) OF 177 - REACTION DIAGRAM NOT AVAILABLE

RS(16) OF 177



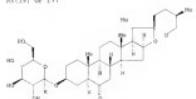
RS(18) OF 177



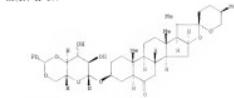
NOTE: stereoselective
COP^t: RS(18): 1 hour, room temperature
RS(18): 1 hour, room temperature; room temperature \rightarrow TGA

SA ANSWER 1 OF 38 CADDRACT COPYRIGHT 2008 ACS ON STM (Continued)

RE(19) OF 171

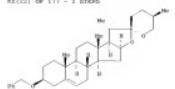
PSK(CB)(2)-TGAH-DMG_x

RE(19) OF 177

NOTE: 1. stereoselective
2. 3 hours, 80 deg C, 3 - 4RE(20) OF 177 - REACTION DIAGRAM NOT AVAILABLE
RE(21) OF 177 - REACTION DIAGRAM NOT AVAILABLE

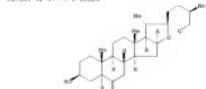
SA ANSWER 3 OF 38 CADDRACT COPYRIGHT 2008 ACS ON STM (Continued)

RE(22) OF 177 - 2 STEPS



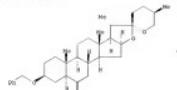
1. 1. NaBH₄, THF
2. H₂O, EtOH
Water
1. 2. H₂, Pd/C, THF
2. 1. H₂, Pd/C, THF
2. 2. H₂, Pd/C, CHCl₃, EtOH

RE(23) OF 177 - 2 STEPS



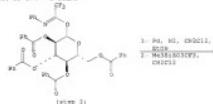
NOTE: 1) stereoselective, 2) stereoselective
COP: 2HMP(1,1) 22 hours, room temperature
2HMP(1,4) 2 hours, room temperature, pH 7
2HMP(1,4) 2 hours, room temperature
2HMP(1) room temperature

RE(23) OF 177 - 2 STEPS

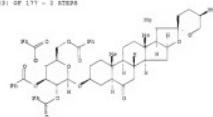


SA ANSWER 3 OF 38 CADDRACT COPYRIGHT 2008 ACS ON STM (Continued)

RE(22) OF 177 - 2 STEPS

3 - Pd, H₂, CHCl₃,
2HMP(1,4) 2 hours, room temperature

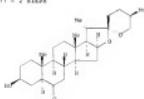
RE(23) OF 177 - 2 STEPS



PSK

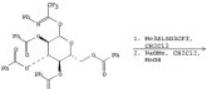
NOTE: 1) stereoselective, 2) stereoselective, mol. sieves used
COP: 2HMP(1) room temperature
2HMP(1,4) room temperature

RE(24) OF 177 - 2 STEPS

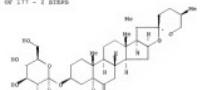


SA ANSWER 3 OF 38 CADDRACT COPYRIGHT 2008 ACS ON STM (Continued)

RE(24) OF 177 - 2 STEPS

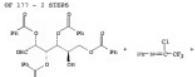
1. NaBH₄, CH₂Cl₂2. H₂, Pd/C, CHCl₃, EtOH

RE(24) OF 177 - 2 STEPS



NOTE: 1) stereoselective, mol. sieves used, 2) stereoselective
COP: 2HMP(1) room temperature
2HMP(1,4) 2 hours, room temperature, pH 7

RE(25) OF 177 - 2 STEPS

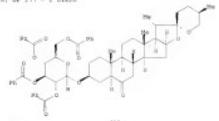


1A. ANSWER 3 OF 38 CADREACT CORRECTIVE 2200 ACO vs STM (Continued)

RE(25) OF 177 - 2 STEPS

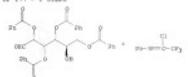


RE(26) OF 177 - 2 STEPS



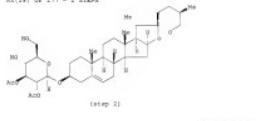
NOTE: 1) stereoselective, 2) stereoselective, mol. sieves used
CDB: 2200 ACO vs STM, room temperature
RE(25,26) room temperature

RE(27) OF 177 - 2 STEPS



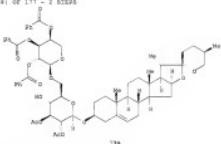
1A. ANSWER 3 OF 38 CADREACT CORRECTIVE 2200 ACO vs STM (Continued)

RE(28) OF 177 - 2 STEPS



1. LiAlD4, Me2CO
2. LiAlD4/NaBH4
CHCl3

RE(29) OF 177 - 2 STEPS



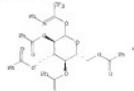
NOTE: 1) stereoselective, 2) stereoselective, mol. sieves used
CDB: 2200 ACO vs STM, room temperature
RE(28,29) -> both Corrective reg C

RE(30) OF 177 - REACTION DIAGRAM NOT AVAILABLE

RE(31) OF 177 - REACTION DIAGRAM NOT AVAILABLE

RE(32) OF 177 - REACTION DIAGRAM NOT AVAILABLE

RE(33) OF 177 - 3 STEPS

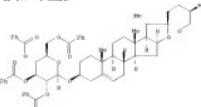


1A. ANSWER 3 OF 38 CADREACT CORRECTIVE 2200 ACO vs STM (Continued)

RE(34) OF 177 - 2 STEPS



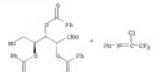
RE(35) OF 177 - 2 STEPS



NOTE: 1) stereoselective, 2) stereoselective, mol. sieves used
CDB: 2200 ACO vs STM, room temperature
RE(34,35) room temperature

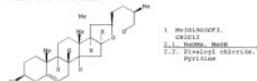
RE(36) OF 177 - REACTION DIAGRAM NOT AVAILABLE

RE(37) OF 177 - 2 STEPS

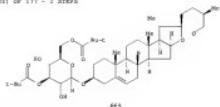


1A. ANSWER 3 OF 38 CADREACT CORRECTIVE 2200 ACO vs STM (Continued)

RE(38) OF 177 - 2 STEPS



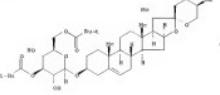
RE(39) OF 177 - 2 STEPS



NOTE: 1) stereoselective, mol. sieves used, 2) stereoselective
CDB: 2200 ACO vs STM, room temperature
RE(38,39) -> both Corrective reg C

RE(40) OF 177 - REACTION DIAGRAM NOT AVAILABLE

RE(41) OF 177 - 2 STEPS



1A. ANSWER 1 OF 34 CADNACT. CONFIDENTIAL 2208 ACS ON STM (Continued)

RI(14) OF 177 - 2 STEPS

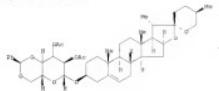


RI(14) OF 177 - 2 STEPS



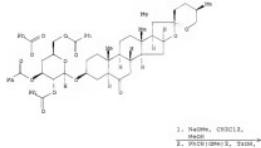
NOTE: 1) stereoselective; mol. excess used; 2) stereoselective
COP: 2TFA(1); 1 - room temperature
2TFA(2); overnight, 45 deg C

RI(15) OF 177 - 2 STEPS

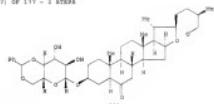


1A. ANSWER 3 OF 34 CADNACT. CONFIDENTIAL 2208 ACS ON STM (Continued)

RI(17) OF 177 - 2 STEPS



RI(17) OF 177 - 2 STEPS



NOTE: 1) stereoselective; 2) stereoselective

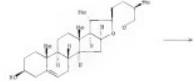
COP: 2TFA(1); 1 - 2 hours, room temperature; pH 7

2TFA(2); 3 hours, 45 deg C, pH 8 - 9

Step 1: 60%
Step 2: 75%

RI(17) OF 177 - REACTION DIAGRAM NOT AVAILABLE

RI(18) OF 177 - 2 STEPS



NOTE: 1) stereoselective; 2) stereoselective

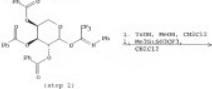
COP: 2TFA(1); 1 - 2 hours, room temperature

2TFA(2); 2.5 hours, reflux

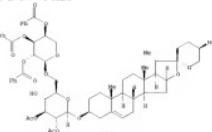
Step 1: 60%
Step 2: 75%

1A. ANSWER 3 OF 34 CADNACT. CONFIDENTIAL 2208 ACS ON STM (Continued)

RI(17) OF 177 - 2 STEPS



RI(18) OF 177 - 2 STEPS

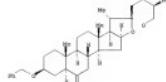


NOTE: 1) stereoselective; 2) stereoselective; mol. excess used
COP: 2TFA(1); 1 - room temperature
2TFA(2); 2 - room temperature deg C

RI(19) OF 177 - REACTION DIAGRAM NOT AVAILABLE

1A. ANSWER 3 OF 34 CADNACT. CONFIDENTIAL 2208 ACS ON STM (Continued)

RI(19) OF 177 - 2 STEPS



NOTE: 1) stereoselective; 2) stereoselective
COP: 2TFA(1); 1 - 1 hour, room temperature
2TFA(2); 1 - 2 hours, room temperature; pH 7
2TFA(3); 1 - 3 hours, room temperature

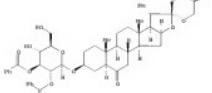
RI(19) OF 177 - REACTION DIAGRAM NOT AVAILABLE

RI(20) OF 177 - 2 STEPS



RI(20) OF 177 - REACTION DIAGRAM NOT AVAILABLE

RI(21) OF 177 - 2 STEPS



NOTE: 1) stereoselective; 2) stereoselective
COP: 2TFA(1); 1 - 2 hours, room temperature

2TFA(2); 2.5 hours, reflux

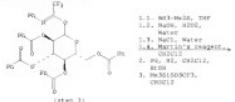
14 ANSWER 3 OF 14 CADDUCT COPROUGHT 2608 ACB ON STM
RE(42) OF 177 - REACTION SCHEMATIC 997 NOT PUBLISHABLE

(Continued)

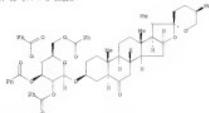
RE(43) OF 177 - 3 ESTERS



RE(44) OF 177 - 3 ESTERS



RE(45) OF 177 - 3 ESTERS



923

NOTE: 1) stereoselective; 2) stereoselective; 3) stereoselective, hplc.

CDD: RE(42): 1) 12 hours, room temperature

RE(42)(1): 12 hours, room temperature, pH 7

RE(42)(2): 3 hours, room temperature

RE(42)(3): room temperature

RE(42)(4): room temperature

14 ANSWER 3 OF 14 CADDUCT COPROUGHT 2608 ACB ON STM
RE(44) OF 177 - 4 ESTERS



RE(44) OF 177 - 4 ESTERS
(step 4)



924

NOTE: 1) stereoselective; 2) stereoselective; 3) stereoselective; 4) stereoselective, hplc, silver used

CDD: RE(44): 1) 12 hours, room temperature, from room temperature -> reflux

RE(44)(1): 12 hours, room temperature, pH 7

RE(44)(2): 3 hours, room temperature

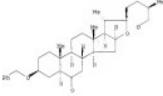
RE(44)(3): room temperature

RE(44)(4): room temperature

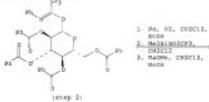
14 ANSWER 3 OF 14 CADDUCT COPROUGHT 2608 ACB ON STM

(Continued)

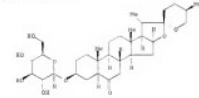
RE(45) OF 177 - 3 ESTERS



RE(46) OF 177 - 3 ESTERS



RE(47) OF 177 - 3 ESTERS



NOTE: 1) stereoselective; 2) stereoselective, hplc, silver used; 3) stereoselective.

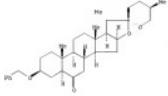
CDD: RE(45): 1) room temperature

RE(45)(1): 12 hours, room temperature, pH 7

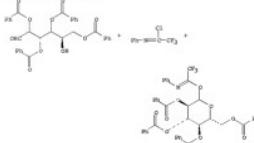
14 ANSWER 3 OF 14 CADDUCT COPROUGHT 2608 ACB ON STM

(Continued)

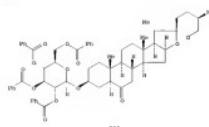
RE(46) OF 177 - 3 ESTERS



RE(46) OF 177 - 3 ESTERS



RE(47) OF 177 - 3 ESTERS
SYNTHESIZED



925

1A ANSWER 1 OF 30 CADNACT CADNACT 2609 ACD vs STM

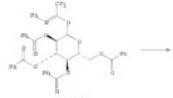
(Continued)

NOTE: stereoselective, stereoselective, mol. siever used.
 ODE: stereoselective
 DMAP: 10 hours, room temperature
 DMAP(1): 2 hours, room temperature

RE(47) OF 171 - 4 STEPS



RE(47) OF 171 - 4 STEPS

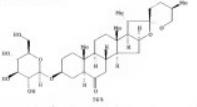


RE(48) OF 171 - 4 STEPS

1A ANSWER 3 OF 30 CADNACT CADNACT 2609 ACD vs STM

(Continued)

RE(48) OF 171 - 4 STEPS



NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, mol. siever used, 4) stereoselective
 ODE: 10 hours, room temperature
 DMAP(1): 2 hours, room temperature; pH 7
 DMAP(2): 2 hours, room temperature
 DMAP(3): 2 hours, room temperature
 DMAP(4): 2 hours, room temperature; pH 7

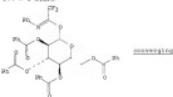
RE(48) OF 171 - 4 STEPS



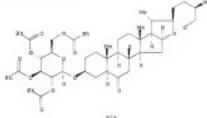
1A ANSWER 3 OF 30 CADNACT CADNACT 2609 ACD vs STM

(Continued)

RE(49) OF 171 - 4 STEPS



RE(49) OF 171 - 4 STEPS



NOTE: stereoselective, stereoselective, stereoselective, mol. siever used
 ODE: stereoselective
 DMAP(1): 10 hours, room temperature
 DMAP(2): 2 hours, room temperature
 DMAP(3): 2 hours, room temperature
 DMAP(4): 2 hours, room temperature

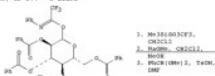
RE(49) OF 171 - 3 STEPS



1A ANSWER 3 OF 30 CADNACT CADNACT 2609 ACD vs STM

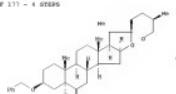
(Continued)

RE(49) OF 171 - 3 STEPS



NOTE: 1) stereoselective, mol. siever used, 2) stereoselective, 3) stereoselective
 ODE: 10 hours, room temperature
 DMAP(1): 2 hours, room temperature; pH 7
 DMAP(2): 2 hours, room temp. pH 4 - 5
 DMAP(3): 2 hours, room temperature

RE(50) OF 171 - 4 STEPS

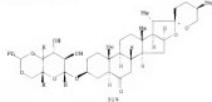


1A ANSWER 3 OF 30 CADREACT COMPILED BY ACD/NSR (Continued)

NS(50) OF 177 - 5 ETERS

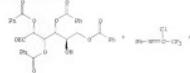


NS(50) OF 177 - 4 ETERS



NOTE: 1) stereoselective; 2) stereoselective, mol. sieves used; 3) stereoselective; 4) stereoselective
ODS: 177(1) room temperature
177(2) room temperature, pH 7
177(3) 2 hours, 10 deg C, pH 3 - 4

NS(50) OF 177 - 4 ETERS

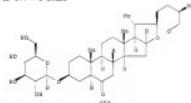


1A ANSWER 3 OF 30 CADREACT COMPILED BY ACD/NSR (Continued)

NS(50) OF 177 - 3 ETERS

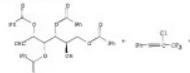


NS(50) OF 177 - 3 ETERS



NOTE: 1) stereoselective; 2) stereoselective, mol. sieves used; 3) stereoselective
ODS: 177(1) 2 hours, room temperature
177(2) 2 hours, room temperature
177(3) 2 hours, room temperature, pH 7

NS(50) OF 177 - 3 ETERS

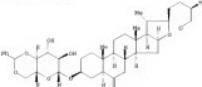


1A ANSWER 3 OF 30 CADREACT COMPILED BY ACD/NSR (Continued)

NS(51) OF 177 - 4 ETERS

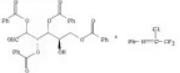


NS(51) OF 177 - 4 ETERS



NOTE: 1) stereoselective; 2) stereoselective, mol. sieves used; 3) stereoselective; 4) stereoselective
ODS: 177(1) room temperature
177(2) room temperature, pH 7
177(3) 3 hours, 50 deg C, pH 3 - 4

NS(52) OF 177 - 3 ETERS

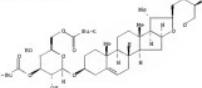


1A ANSWER 3 OF 30 CADREACT COMPILED BY ACD/NSR (Continued)

NS(53) OF 177 - 3 ETERS



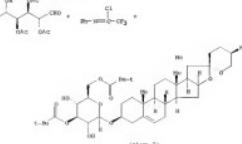
NS(53) OF 177 - 3 ETERS



NOTE: 1) stereoselective; 2) stereoselective, mol. sieves used; 3) stereoselective; 4) stereoselective
ODS: 177(1) room temperature
177(2) room temperature, pH 7
177(3) 2 hours, room temperature
177(4) 2 hours, room temperature, pH 7

NS(54) OF 177 - REACTION DIAGRAM NOT AVAILABLE

NS(55) OF 177 - 3 ETERS



1A ANSWER 1 OF 10 CADREACT COPYRIGHT 2008 ACD/CS Chem3D Pro (Continued)

R1(51) OF 171 - 3 STEPS

1. K2CO3, MeOH
 2. HgCl2, CHCl3
 3. NaBH4, MeOH, -78°C
- TFA

R1(51) OF 171 - 3 STEPS



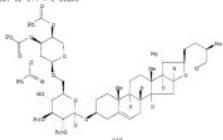
TFA

NOTE: 1) stereoselective, 2) stereoselective, mol. sieves used, 3) stereoselective

COS: 1) 2 hours, room temperature
2) 24h(1) 200°C
3) overnight, at 0°C

1A ANSWER 3 OF 10 CADREACT COPYRIGHT 2008 ACD/CS Chem3D Pro (Continued)

R1(56) OF 171 - 3 STEPS

NOTE: stereoselective, stereoselective, mol. sieves used,
stereoselective, 2 hours, room temperature
2) 24h(1) 200°C
3) overnight, at 0°C

R1(57) OF 171 - REACTION SEPARATE NOT AVAILABLE

R1(58) OF 171 - REACTION SEPARATE NOT AVAILABLE

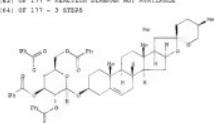
R1(59) OF 171 - REACTION SEPARATE NOT AVAILABLE

R1(60) OF 171 - REACTION SEPARATE NOT AVAILABLE

R1(61) OF 171 - REACTION SEPARATE NOT AVAILABLE

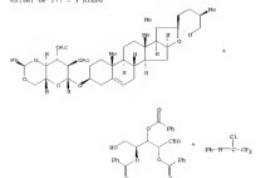
R1(62) OF 171 - REACTION SEPARATE NOT AVAILABLE

R1(63) OF 171 - 3 STEPS

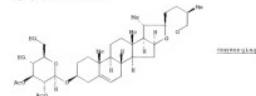


1A ANSWER 3 OF 10 CADREACT COPYRIGHT 2008 ACD/CS Chem3D Pro (Continued)

R1(56) OF 171 - 3 STEPS

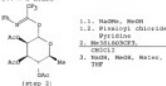


R1(56) OF 171 - 3 STEPS

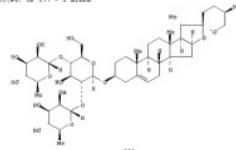


1A ANSWER 3 OF 10 CADREACT COPYRIGHT 2008 ACD/CS Chem3D Pro (Continued)

R1(64) OF 171 - 3 STEPS



R1(64) OF 171 - 3 STEPS

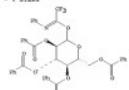


NOTE: 1) 1-methoxybenzene, 2) 1-methoxybenzene, mol. sieves used, 3)

stereoselective, 2 hours, room temperature
2) 24h(1) 200°C
3) Ph-NH-CO-CH2-Cl
STEP(3): overnight, at 0°C

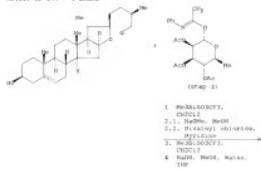
R1(65) OF 171 - REACTION SEPARATE NOT AVAILABLE

R1(66) OF 171 - 3 STEPS

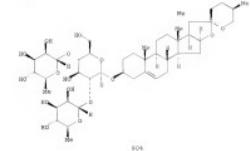


1A. ANSWER 3 OF 3B CADDRACT COPIRIGHT 2008 ACD vs STN (Continued)

R2(44) OF 177 - 6 STEPS



R2(44) OF 177 - 4 STEPS



SIN

R2(45): 1) stereoselective, not always used; 2) stereoselective; 3) stereoselective, not stereo used; 4) stereoselective
R2(46): 1) 10 hours, room temperature
R2(47): 1) room temperature
R2(48): 1) room temperature
R2(49): 1) room temperature
R2(50): 1) room temperature

R2(47) OF 177 - REACTION DIAGRAM NOT AVAILABLE

R2(44) OF 177 - REACTION DIAGRAM NOT AVAILABLE

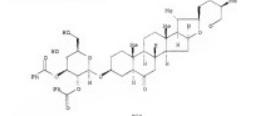
R2(44) OF 177 - REACTION DIAGRAM NOT AVAILABLE

1A. ANSWER 3 OF 3B CADDRACT COPIRIGHT 2008 ACD vs STN (Continued)

R2(76) OF 177 - 3 STEPS



R2(76) OF 177 - 3 STEPS



R2(76): 1) stereoselective; 2) stereoselective; 3) stereoselective
R2(77): 1) 2 hours, 10% Pd/C, pH 2 = 4
R2(78): 1.5 hours, reflux

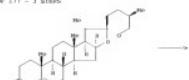
1A. ANSWER 3 OF 3B CADDRACT COPIRIGHT 2008 ACD vs STN (Continued)

R2(79) OF 177 - REACTION DIAGRAM NOT AVAILABLE

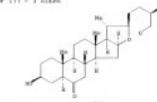
R2(79) OF 177 - REACTION DIAGRAM NOT AVAILABLE

R2(79) OF 177 - REACTION DIAGRAM NOT AVAILABLE

R2(79) OF 177 - 3 STEPS



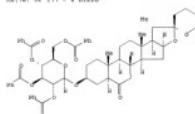
R2(79) OF 177 - 3 STEPS



R2(79): 1) stereoselective; 2) stereoselective; 3) stereoselective
R2(79)(1): 1 hour, room temperature
R2(79)(2): 1 hour, room temperature
R2(79)(3): 1 hour, room temperature → ethanol
R2(79)(4): 5 hours, room temperature, pH 7
R2(79)(5): 5 hours, room temperature

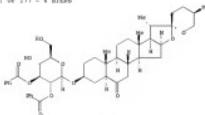
1A. ANSWER 3 OF 3B CADDRACT COPIRIGHT 2008 ACD vs STN (Continued)

R2(76) OF 177 - 4 STEPS



1. NaOMe, CrCl₃,
MeOH
2. PDC, DMAP, 2.0M
3. LiCl, Pyridine
4. H₂, Pd/C, CHCl₃

R2(76) OF 177 - 4 STEPS



R2(76): 1) stereoselective; 2) stereoselective; 3) stereoselective; 4)
CONE: R2(76)(1): 1 hour, room temperature, pH 7
R2(76)(2): 1 hour, room temperature
R2(76)(3): 1 hour, room temperature
R2(76)(4): 1 hour, reflux

R2(77) OF 177 - REACTION DIAGRAM NOT AVAILABLE

R2(79) OF 177 - REACTION DIAGRAM NOT AVAILABLE

R2(80) OF 177 - REACTION DIAGRAM NOT AVAILABLE

R2(81) OF 177 - REACTION DIAGRAM NOT AVAILABLE

1A. ANSWER 3 OF 30 CADDRACT COMPOUND 2100 ACS vs STM (Continued)

NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4) stereoselective, mol. sieves used.

CDS: 2100(1) 2 hours, room temperature

2100(2) 2 hours, room temperature, room temperature \rightarrow reflux

2100(3) 2 hours, room temperature, room temperature, pH 7

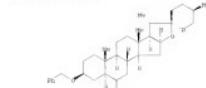
2100(4) 3 hours, room temperature

2100(5) 3 hours, room temperature, pH 7

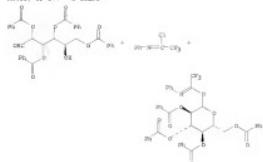
2100(6) 2 hours, room temperature, pH 7

2100(7) 3 hours, 50 deg C, pH 3 - 4

RI(44) OF 177 - 5 STEPS

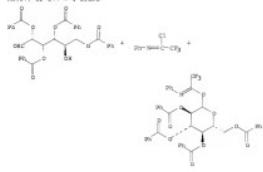


RI(44) OF 177 - 5 STEPS

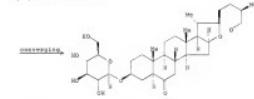


1A. ANSWER 3 OF 30 CADDRACT COMPOUND 2100 ACS vs STM (Continued)

RI(47) OF 177 - 4 STEPS



RI(47) OF 177 - 4 STEPS



NOTE: stereoselective, stereoselective, mol. sieves used,

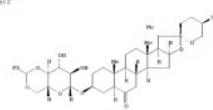
CDS: 2100(1) room temperature

2100(2) 2 hours, room temperature; pH 7

2100(3) 2 hours, room temperature

2100(4) = REACTION REAGANT NOT AVAILABLE

1A. ANSWER 3 OF 30 CADDRACT COMPOUND 2100 ACS vs STM (Continued)

RI(48) OF 177 - 4 STEPS
CONTINUING
2100(5) - 8 STEPS

RI(48) OF 177 - 4 STEPS

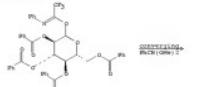


1A. ANSWER 3 OF 30 CADDRACT COMPOUND 2100 ACS vs STM (Continued)

RI(49) OF 177 - 4 STEPS



RI(49) OF 177 - 4 STEPS



1A. ANSWER 1 OF 30 CADNACT CONFIDENTIAL 2600 ACB ON STM (Continued)

RI(32): OF L17 - 4 STEPS



NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4) 1 mol. excess used, 5) stereoselective.

CDS: RI(32)(1) 2 hours, room temperature
RI(32)(2) 1 hour, room temperature
RI(32)(3) 15 hours, room temperature → ESI(32)
RI(32)(4) 1 hour, room temperature
RI(32)(5) 1 hour, room temperature
RI(32)(6) 1 hour, room temperature, pH 7
RI(32)(7) 3 hours, room temperature
RI(32)(8) 3 hours, room temperature

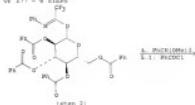
RI(34): OF L17 - REACTION SCHEMATIC NOT AVAILABLE

RI(35): OF L17 - 5 STEPS



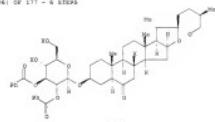
1A. ANSWER 3 OF 30 CADNACT CONFIDENTIAL 2600 ACB ON STM (Continued)

RI(36): OF L17 - 6 STEPS



(step 2)

RI(36): OF L17 - 6 STEPS



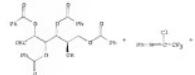
E74

NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4) 1 mol. excess used, 5) stereoselective, 6) stereoselective.

CDS: RI(36)(1) 2 hours, room temperature
RI(36)(2) 1 hour, room temperature
RI(36)(3) 1 hour, room temperature, pH 7
RI(36)(4) 1 hour, room temperature
RI(36)(5) 1 hour, room temperature
RI(36)(6) 1.5 hours, reflux

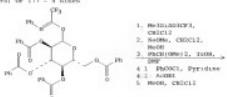
RI(37): OF L17 - REACTION SCHEMATIC NOT AVAILABLE

RI(38): OF L17 - 4 STEPS



1A. ANSWER 3 OF 30 CADNACT CONFIDENTIAL 2600 ACB ON STM (Continued)

RI(39): OF L17 - 4 STEPS

1. MeLi(Bn)₂, CHCl₃
2. NaBH₄, EtOH,
3. H₂O₂, NaOAc,
4. 1. P(OBu)₃, THF,
5. 1. Ac₂O, DCCD
6. 1. LiAlH₄, Et₂O

(step 1)

RI(39): OF L17 - 5 STEPS

Structure L17: A complex polycyclic system with multiple hydroxyl groups and a cyclohexane ring fused to the structure.

NOTE: 1) stereoselective, mol. excess used, 2) stereoselective, 3) stereoselective, 4) stereoselective, 5) stereoselective.

CDS: RI(39)(1) 2 hours, room temperature, pH 7
RI(39)(2) 1 hour, room temperature
RI(39)(3) 1 hour, room temperature
RI(39)(4) 1 hour, room temperature
RI(39)(5) 1 hour, room temperature

RI(39): OF L17 - 6 STEPS

Structure L17: A complex polycyclic system with multiple hydroxyl groups and a cyclohexane ring fused to the structure.

1A. ANSWER 3 OF 30 CADNACT CONFIDENTIAL 2600 ACB ON STM (Continued)

RI(39): OF L17 - 6 STEPS

Structure L17: A complex polycyclic system with multiple hydroxyl groups and a cyclohexane ring fused to the structure.

(step 1)

RI(39): OF L17 - 6 STEPS

Structure L17: A complex polycyclic system with multiple hydroxyl groups and a cyclohexane ring fused to the structure.

NOTE: 1) stereoselective, 2) stereoselective, mol. excess used, 3) stereoselective, 4) stereoselective, 5) stereoselective, 6) stereoselective.

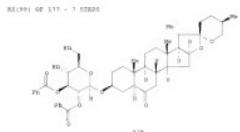
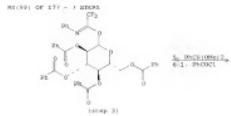
CDS: RI(39)(1) 2 hours, room temperature
RI(39)(2) 1 hour, room temperature, pH 7
RI(39)(3) 1 hour, room temperature
RI(39)(4) 1 hour, room temperature
RI(39)(5) 1 hour, room temperature
RI(39)(6) 1 hour, reflux

RI(39): OF L17 - 7 STEPS

Structure L17: A complex polycyclic system with multiple hydroxyl groups and a cyclohexane ring fused to the structure.

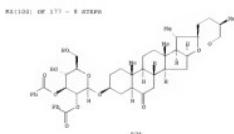
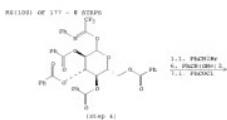
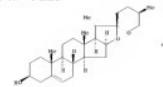
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14 ASSAY 1 OF 38 CADDRACT CONFIDENTIAL 2600 ACS on S2N (Continued)



902B: 1) stereoselective, 2) stereoselective, 3) stereoselective, mol. sieves used,
silver used, 4) stereoselective, 5) stereoselective,
6) stereoselective, 7) stereoselective, 8) stereoselective,
9) stereoselective, 10) stereoselective, 11) stereoselective
902C: 1) 1 hour, room temperature
902D: 1) 1 hour, 50 deg C, pH 3 - 4
902E: 1) 3 hours, room temperature
902F: 1) 3 hours, 50 deg C, pH 3 - 4
902G: 1) 3 hours, room temperature
902H: 2.5 hours, reflux

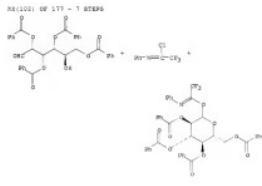
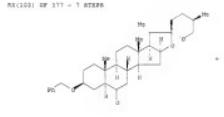
14 ASSAY 3 OF 38 CADDRACT CONFIDENTIAL 2600 ACS on S2N (Continued)



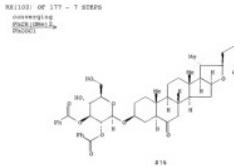
14 ASSAY 3 OF 38 CADDRACT CONFIDENTIAL 2600 ACS on S2N (Continued)

902B: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4)
stereoselective, 5) silver used, 6) stereoselective,
7) stereoselective, 8) stereoselective, 9) stereoselective
902C: 1) 1 hour, room temperature
902D: 1) 1 hour, 50 deg C, pH 3 - 4
902E: 1) 3 hours, room temperature
902F: 1) 3 hours, 50 deg C, pH 3 - 4
902G: 1) 3 hours, room temperature
902H: 2.5 hours, reflux

RE(101) OF 177 - REACTION DIAGRAM NOT AVAILABLE.



14 ASSAY 3 OF 38 CADDRACT CONFIDENTIAL 2600 ACS on S2N (Continued)

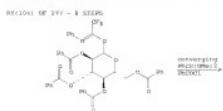


NOTE: stereoselective, stereoselective, mol. sieves used,
stereoselective, stereoselective, stereoselective,
902B: 1) 1 hour, room temperature
902C: 1) 1 hour, 50 deg C, pH 3 - 4
902D: 1) 3 hours, 50 deg C, pH 3 - 4
902E: 1) 3 hours, room temperature
902F: 2.5 hours, reflux

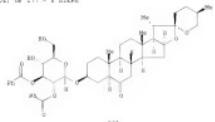
RE(101) OF 177 - REACTION DIAGRAM NOT AVAILABLE.



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MEKE: stereoselective, steroeodselective, stereoselective. Mol. sieves
stereoselective, stereoselective, stereoselective, stereoselective,
GHE: STREP(1) 12 hours, room temperature
STREP(2) 12 hours, room temperature
STREP(3) 5 hours, room temperature; pH 7
STREP(4) 5 hours, room temperature
STREP(5) 2 hours, room temperature
STREP(6) 2 hours, room temperature
STREP(7) 2 hours, room temperature; pH 7
STREP(8) 3 hours, room temperature
STREP(9) 3 hours, room temperature
STREP(10) 3 hours, room temperature

REC'D 105 08 177 - TRANSACTION DIAGRAM NOT AVAILABLE

16 NUMBER 3 OF 35 CREDITLINE © 2008 NOF — ATW (Document ID: 10000000000000000000)

NOTE: 1) stereoselective, 2) stereoselective, mol. sieves used, 3) stereoselective, 4) stereoselective, mol. sieves used, 5) stereoselective

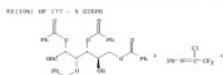
CHEM:

- SEZP(1) 2 hours, room temperature
- SEZP(2) 2 hours, room temperature
- SEZP(3,1) room temperature
- SEZP(3,2) -78°C
- SEZP(4) room temperature
- SEZP(5) overnight, -60°C

NS(107) DF 177 - 4 STEPS

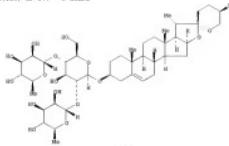
RR(107): DF 177 - 4 STERS

16. ADDRESS 1 OF 18 GRANADA STATION 1100 APR 08 2011 (P06146)



1. HgCl_2 , HgO
 2. $\text{NaBH}_4\text{NO}_2\text{CF}_3$, CHCl_2
 3. 1. NaBH_4 , NaOH
2. 1. PivAlCl , chloroform ,
 Pyridine
 4. $\text{NaBH}_4\text{NO}_2\text{CF}_3$, CHCl_2
 5. NaBH_4 , NaOH , Water ,
 TFA

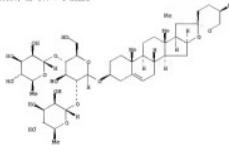
2013-01-06 10:37:55



- 304 -

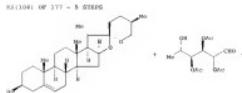
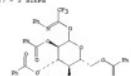
14 NOVEMBER 2, 1978 CALIFORNIA OCCUPATION 2400 NO. 2774 © 1978

ISSN1021-893X 377 - 6 2003.03



NOTE: stereoselective, stereoselective, mol. sieves used
 stereoselective, stereoselective
 CBN, 100-200 mesh, 100°C temperature
 STEP(1) room temperature
 STEP(2) overnight, 45 deg C
 STEP(4.1) room temperature
 STEP(4.2) 8 deg C

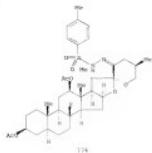
卷之三



9

14. ANSWER 4 OF 38 CADENCT CORRECTIVE 2008 ACS on STM (Continued)

RI(1) OF 53



Dicyclohexylcarbodiimide, DMAP

RI(4) OF 53



Dicyclohexylcarbodiimide, DMAP

RI(4) OF 53



Dicyclohexylcarbodiimide, DMAP

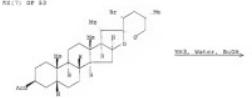
14. ANSWER 4 OF 38 CADENCT CORRECTIVE 2008 ACS on STM (Continued)

RI(8) OF 53



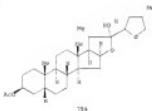
THF, Water, BuLi

RI(1) OF 53



THF, Water, BuLi

RI(8) OF 53



THF, Water, BuLi

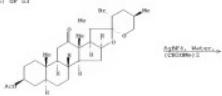
RI(8) OF 53



THF, Water, BuLi

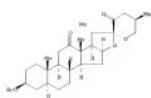
14. ANSWER 4 OF 38 CADENCT CORRECTIVE 2008 ACS on STM (Continued)

RI(5) OF 53



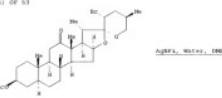
Acetone, MeOH

RI(5) OF 53



THF

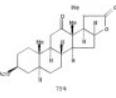
RI(4) OF 53



Acetone, MeOH, THF

14. ANSWER 4 OF 38 CADENCT CORRECTIVE 2008 ACS on STM (Continued)

RI(8) OF 53

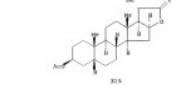


RI(8) OF 53



Acetone, MeOH

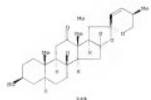
RI(10) OF 53



Acetone, MeOH, THF

1A. ANSWER 1 OF 30 CADENCT COMPACT 2000 ACS on STM (Continued)

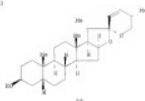
RI(10) OF 53



RI(11) OF 53

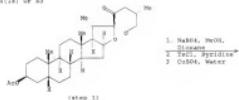


RI(11) OF 53



1A. ANSWER 4 OF 30 CADENCT COMPACT 2000 ACS on STM (Continued)

RI(16) OF 53



RI(16) OF 53



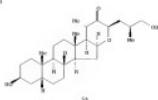
NOTE: stereoselective

RI(14) OF 53

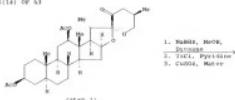


1A. ANSWER 4 OF 30 CADENCT COMPACT 2000 ACS on STM (Continued)

RI(11) OF 53



RI(14) OF 53

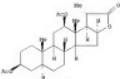


RI(14) OF 53

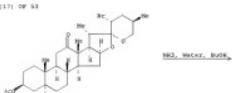


1A. ANSWER 4 OF 30 CADENCT COMPACT 2000 ACS on STM (Continued)

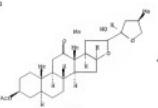
RI(16) OF 53



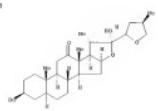
RI(17) OF 53



RI(14) OF 53

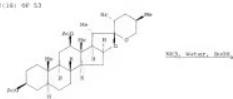


RI(17) OF 53

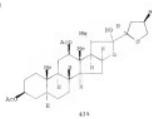


1A ANSWER 1 OF 30 CADREACT CONFIDENTIAL 2008 ACO vs STM (Continued)

RI(14) OF 53

Me₃Si₂ Water, DMSO

RI(15) OF 53



414

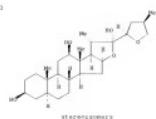
1A ANSWER 4 OF 30 CADREACT CONFIDENTIAL 2008 ACO vs STM (Continued)

RI(15) OF 53



315

RI(15) OF 53

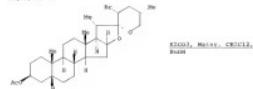


316

RI(16) OF 53

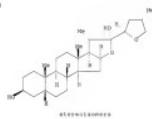
Me₃Si₂ Water, (CHMORI)₂

RI(16) OF 53

Ketone, Me₃Si₂, CHMORI₂,
Water

1A ANSWER 4 OF 30 CADREACT CONFIDENTIAL 2008 ACO vs STM (Continued)

RI(20) OF 53



stereoisomers

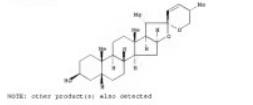
318

1A ANSWER 4 OF 30 CADREACT CONFIDENTIAL 2008 ACO vs STM (Continued)

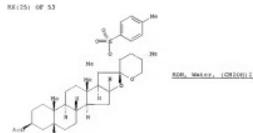
RI(24) OF 53

Me₃Si₂ Water, (CHMORI)₂

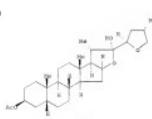
RI(24) OF 53

Me₃Si₂ other product(s) also detected

RI(25) OF 53

Me₃Si₂ Water, (CHMORI)₂

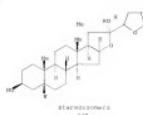
RI(25) OF 53



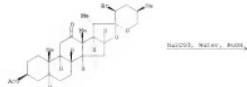
415

1A. ANSWER 1 OF 34 CADREACT COPYRIGHT 2009 ACD/NSR (Continued)

RX(1A) OF 53



RX(1A) OF 53

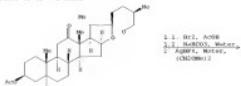


RX(1A) OF 53

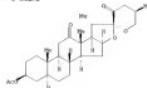


1A. ANSWER 4 OF 34 CADREACT COPYRIGHT 2009 ACD/NSR (Continued)

RX(1B) OF 53 - 2 STEPS

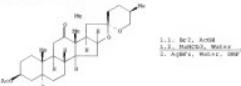


RX(1B) OF 53 - 2 STEPS



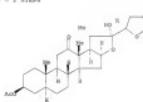
NOTE: 1) stereoselective

RX(1B) OF 53



1A. ANSWER 4 OF 34 CADREACT COPYRIGHT 2009 ACD/NSR (Continued)

RX(2B) OF 53 - 2 STEPS



NOTE: 1) stereoselective

RX(2B) OF 53 - 2 STEPS



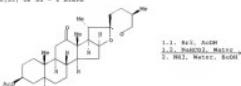
RX(2B) OF 53 - 2 STEPS



NOTE: 1) stereoselective

1A. ANSWER 4 OF 34 CADREACT COPYRIGHT 2009 ACD/NSR (Continued)

RX(3B) OF 53 - 2 STEPS



RX(3B) OF 53 - 2 STEPS



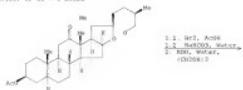
RX(3B) OF 53 - 2 STEPS



NOTE: 1) stereoselective

14 ANSWER 4 OF 34 CADREACT COPYRIGHT 2008 ACS ON STM (Continued)

RS(32) OF 53 - 2 STERS

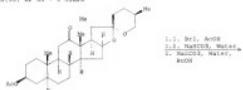


RS(33) OF 53 - 2 STERS



NOTE: 1) stereoselective

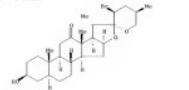
RS(34) OF 53 - 2 STERS



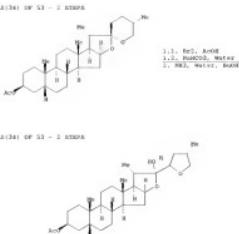
NOTE: 1) stereoselective

14 ANSWER 4 OF 34 CADREACT COPYRIGHT 2008 ACS ON STM (Continued)

RS(35) OF 53 - 2 STERS



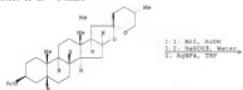
RS(36) OF 53 - 2 STERS



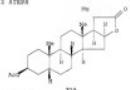
NOTE: 1) stereoselective

14 ANSWER 4 OF 34 CADREACT COPYRIGHT 2008 ACS ON STM (Continued)

RS(35) OF 53 - 2 STERS

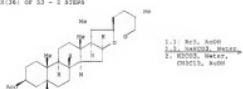


RS(36) OF 53 - 2 STERS



NOTE: 1) stereoselective

RS(37) OF 53 - 2 STERS



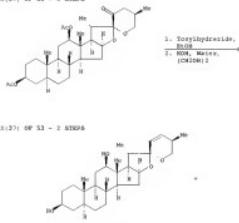
14 ANSWER 4 OF 34 CADREACT COPYRIGHT 2008 ACS ON STM (Continued)

RS(38) OF 53 - 2 STERS



NOTE: 1) stereoselective

RS(39) OF 53 - 2 STERS



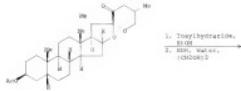
238

14 ANSWER 4 OF 34 CADENCT COPIRIGHT 2008 ACD/NSN (Continued)

NS(11) OF 53 - 2 ATOMS



NS(13) OF 53 - 2 ATOMS



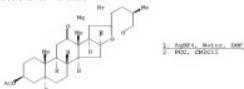
NS(13) OF 53 - 2 ATOMS



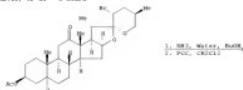
NOTE: 2) other product(s) also detected

14 ANSWER 4 OF 34 CADENCT COPIRIGHT 2008 ACD/NSN (Continued)

NS(13) OF 53 - 2 ATOMS



NS(14) OF 53 - 2 ATOMS

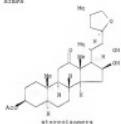


14 ANSWER 4 OF 34 CADENCT COPIRIGHT 2008 ACD/NSN (Continued)

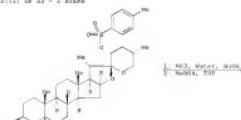
NS(11) OF 53 - 3 ATOMS



NS(11) OF 53 - 2 ATOMS

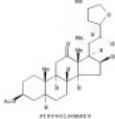


NS(12) OF 53 - 2 ATOMS

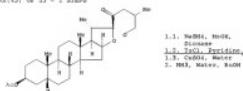


14 ANSWER 4 OF 34 CADENCT COPIRIGHT 2008 ACD/NSN (Continued)

NS(12) OF 53 - 2 ATOMS



NS(13) OF 53 - 2 ATOMS



SA ANNEH 4 OF 38 CADREACT COMPIENT ZINN ACS ON STM (Continued)

RI(44) OF 53 - 2 STEPS



RI(44) OF 53 - 2 STEPS



NOTE: 1) stereoselective

RI(45) OF 53 - 2 STEPS



SA ANNEH 4 OF 38 CADREACT COMPIENT ZINN ACS ON STM (Continued)

RI(46) OF 53 - 2 STEPS



RI(47) OF 53 - 2 STEPS



RI(47) OF 53 - 2 STEPS



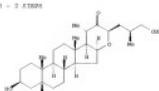
RI(48) OF 53 - 2 STEPS

SA ANNEH 4 OF 38 CADREACT COMPIENT ZINN ACS ON STM (Continued)

RI(48) OF 53 - 2 STEPS



RI(48) OF 53 - 2 STEPS

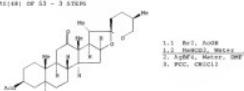


NOTE: 1) stereoselective

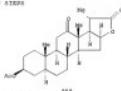


SA ANNEH 4 OF 38 CADREACT COMPIENT ZINN ACS ON STM (Continued)

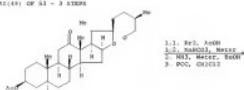
RI(48) OF 53 - 3 STEPS



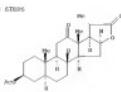
RI(48) OF 53 - 3 STEPS



RI(48) OF 53 - 3 STEPS



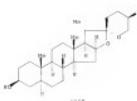
RI(48) OF 53 - 3 STEPS



NOTE: 1) stereoselective

SA ANSWER 4 OF 38 CADREACT COPYRIGHT 2008 ACS on STN (Continued)

RS(1): OF 1

RS(1): 4 THERE ARE 6 CITING REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RS PDF(S)

SA ANSWER 4 OF 38 CADREACT COPYRIGHT 2008 ACS on STN

T1 137(1217) 2002; Cited by:

14B-hydroxyandrost-13-en-17-one

A2 14B-hydroxyandrost-13-en-17-one

C5 Center for New Directions in Organic Synthesis, Department of Chemistry,

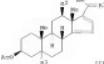
D0 Journal of Organic Chemistry (1992), 47(12), 4792-4796

M9 American Chemical Society

S2 0002-7867(1992)47:12;4792-4796

S3 English

S4 10.1002/joc.5100471201



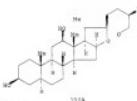
AB Two methods have been developed for efficient conversion of pregn-14,16-dien-3 β -ol into 14B-hydroxyandrost-13-en-17-one. One method uses a palladium-catalyzed reaction of I with sodium borohydride and singlet copper. The reaction is illustrated by the conversion of I ($R_1 = R_2 = R_3 = H$) into 14B-hydroxyandrost-13-en-17-one II, via the corresponding aldehyde III ($R_1 = H, R_2 = R_3 = OAc$). In addition to the synthesis of the target compound, it provides II in relatively low yield, accompanied by a smaller amount of 14B-hydroxyandrost-13-en-17-one. A second method is also illustrated by the two-step conversion of I into hydroxy ketone IV ($R_1 = R_2 = R_3 = H$) and its conversion into 14B-hydroxyandrost-13-en-17-one V ($R_1 = R_2 = R_3 = OAc$). Both routes are described below.

RS(1): OF 43



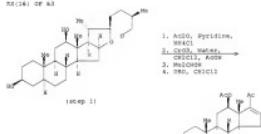
SA ANSWER 4 OF 38 CADREACT COPYRIGHT 2008 ACS on STN (Continued)

RS(1): OF 43

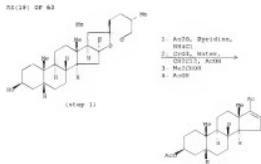


NOTE: stereochemistry

RS(1): OF A3

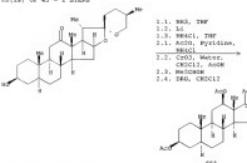


RS(1): OF A3



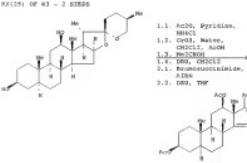
SA ANSWER 4 OF 38 CADREACT COPYRIGHT 2008 ACS on STN (Continued)

RS(1): OF A3 - 2 STEPS

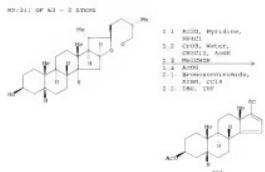


NOTE: 1) stereochemistry

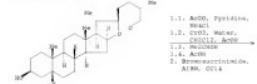
RS(1): OF A3 - 2 STEPS



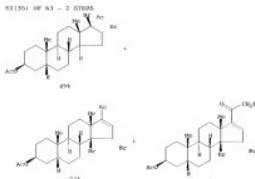
14 ANSWER 4 OF 19 CHAP00CT COPYRIGHT 2008 ACG OF 2018 (COPIES & HAND)



PGC021 OF 92 - 3 57185



14 ANSWER 6 OF 19 CONTRACT © COPYRIGHT 2009 KBN OR KTM DOME LEARNED



19038-2) *Microcoleus chthonoplastes*, *Microcoleus chthonoplastes*

ME(39) OV 63 - 4 ATMPS



NOTE: 3) stereoselective, regioselective, 34% overall yield, c-stereoselective

18 NUMBER 3 OF 18 CIRCUMSTANTIAL EVIDENCE ACT OF 1978 (Continued)

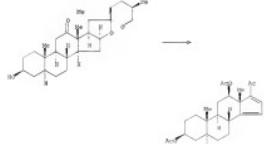


32/331 CG 63 n. 5 AT&T

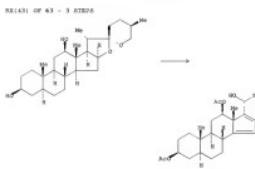


19238-31 at 070000Z NOV 13

WORKS OF 1881 - 3 - 37298



14 ANSWER 4 OF 18 CRAMERIX. COPYRIGHT 2008 NCIS CS 078 (C)2008



NOTE: 3) stereoselective

ME(44) 08' 43 = 3 87875

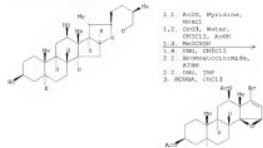


33(44) OF 63 - 3 STEPS

334

1A. ASSEMBLY 4 OF 1B. CADDRACT. COPRIGHT 2009 ACD/Labs STM (Continued)

RE(44) OF 43 - 2 STEPS



NOTE: 3) stereoselective

RE(44) OF 43 - 3 STEPS



NOTE: 3) stereoselective, regioselective

1A. ASSEMBLY 4 OF 1B. CADDRACT. COPRIGHT 2009 ACD/Labs STM (Continued)

RE(45) OF 43 - 4 STEPS



NOTE: 1) stereoselective, 4) stereoselective

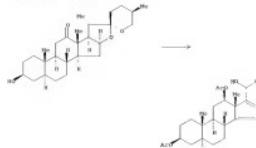
RE(45) OF 43 - 4 STEPS



NOTE: 1) stereoselective, 4) stereoselective, regioselective

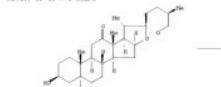
1A. ASSEMBLY 4 OF 1B. CADDRACT. COPRIGHT 2009 ACD/Labs STM (Continued)

RE(45) OF 43 - 4 STEPS

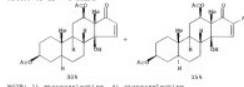


NOTE: 3) stereoselective, 4) stereoselective

RE(45) OF 43 - 4 STEPS



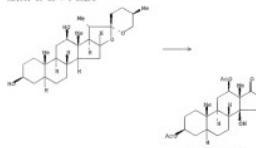
RE(45) OF 43 - 4 STEPS



NOTE: 3) stereoselective, 4) stereoselective

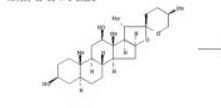
1A. ASSEMBLY 4 OF 1B. CADDRACT. COPRIGHT 2009 ACD/Labs STM (Continued)

RE(45) OF 43 - 4 STEPS

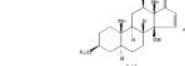


NOTE: 3) stereoselective, 4) stereoselective, regioselective

RE(45) OF 43 - 4 STEPS

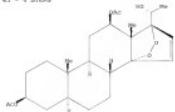


RE(45) OF 43 - 4 STEPS



1A. ASYMMETRIC 4 OF 30 CADDREACT COPOLY(METHYL ACO) ON STM (Continued)

RI(151) OF 43 - 4 STEPS



NOTE: 3) stereoselective, 4) regioselective, regioselective, optimized in reaction conditions

RI(144) OF 43 - 4 STEPS



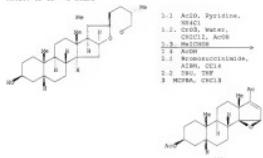
RI(144) OF 43 - 4 STEPS



NOTE: 3) stereoselective, 4) regioselective

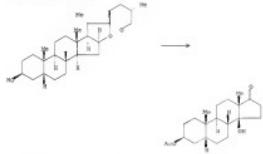
1A. ASYMMETRIC 4 OF 30 CADDREACT COPOLY(METHYL ACO) ON STM (Continued)

RI(141) OF 43 - 3 STEPS



NOTE: 3) stereoselective

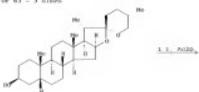
RI(144) OF 43 - 3 STEPS



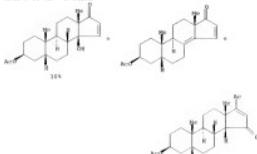
NOTE: 3) stereoselective, regioselective

1A. ASYMMETRIC 4 OF 30 CADDREACT COPOLY(METHYL ACO) ON STM (Continued)

RI(151) OF 43 - 3 STEPS



RI(151) OF 43 - 3 STEPS



NOTE: 3) stereoselective, regioselective, 3x overall yield

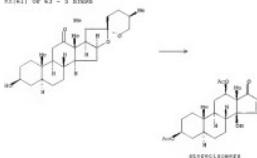
1A. ASYMMETRIC 4 OF 30 CADDREACT COPOLY(METHYL ACO) ON STM (Continued)

RI(140) OF 43 - 3 STEPS



NOTE: 3) stereoselective, 1) stereoselective

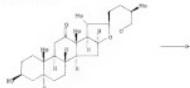
RI(141) OF 43 - 3 STEPS



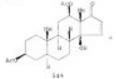
NOTE: 1) regioselective, 4) stereoselective, 2) stereoselective, regioselective

1A ANSWER 4 OF 10 CADREACT CONFIDENTIAL 1200 ACS on STM (Continued)

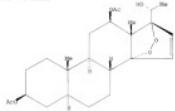
RX(2): OF 63 - 5 STEPS



RX(4): OF 63 - 5 STEPS



RX(5): OF 63 - 5 STEPS



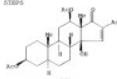
NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, regioselective, optimized on reaction conditions

1A ANSWER 6 OF 10 CADREACT CONFIDENTIAL 1200 ACS on STM (Continued)

RX(5): OF 63 - 5 STEPS



RX(6): OF 63 - 5 STEPS



NOTE: 1) stereoselective, 2) stereoselective, 3) regioselective

RE. CHT 21 THERE ARE 31 CITING REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE PORT

1A ANSWER 7 OF 10 CADREACT CONFIDENTIAL 1200 ACS on STM

1B ANSWER 7 OF 10 CADREACT

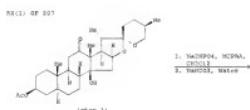
1C ANSWER 7 OF 10 CADREACT
1D ANSWER 7 OF 10 CADREACT

1E ANSWER 7 OF 10 CADREACT
1F ANSWER 7 OF 10 CADREACT

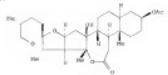
1G



AA: Selective Functionalization (top protocol): A steroid with an acetoxy group at C17 was converted to a steroid with a hydroxyl group at C11. This was achieved by first performing a Baeyer-Villiger oxidation of the C17-acetoxy group to a C17-ketone, followed by a Dieckmann condensation of the C17-ketone with malonate to form a cyclic malonate intermediate. Subsequent reduction of the C17-ketone in the intermediate resulted in a steroid with a hydroxyl group at C11. The overall yield was 44% (from operation 1) and 44% (from operation 2).



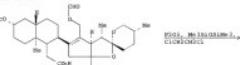
RX(1): OF 20:



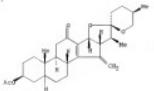
NOTE: Baeyer-Villiger oxides

1A ANSWER 7 OF 10 CADREACT CONFIDENTIAL 1200 ACS on STM (Continued)

RX(3): OF 20:



RX(5): OF 20:



RX(6): OF 20:



14. ANSWER T OF 38 CADREACT CONFIDENTIAL ACS ON STM (Continued)

RI(8) OF 321:

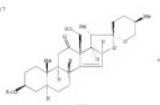


NOTE: Friedel-Crafts reaction, stereoselective

RI(9) OF 322:

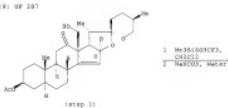


RI(10) OF 323:

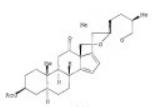


14. ANSWER T OF 38 CADREACT CONFIDENTIAL ACS ON STM (Continued)

RI(11) OF 327:



RI(12) OF 327:

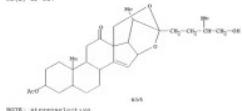


RI(13) OF 327:

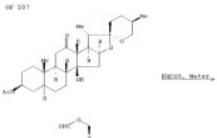


14. ANSWER T OF 38 CADREACT CONFIDENTIAL ACS ON STM (Continued)

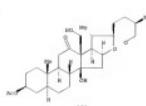
RI(14) OF 327:



RI(15) OF 327:

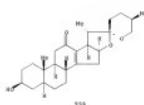


RI(16) OF 327:



14. ANSWER T OF 38 CADREACT CONFIDENTIAL ACS ON STM (Continued)

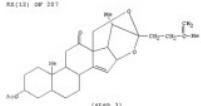
RI(17) OF 327:



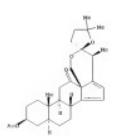
RI(18) OF 327 - REACTION DIAGRAM NOT AVAILABLE

RI(19) OF 327 - REACTION DIAGRAM NOT AVAILABLE

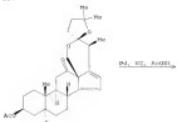
RI(20) OF 327:



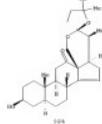
RI(21) OF 327:



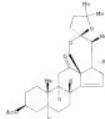
1A. ASYMMETRIC T OF 2B CADDENCT COMPOUND 200B ACS vs 20B
RX(13) OF 2B
(Continued)



1A. ASYMMETRIC T OF 2B CADDENCT COMPOUND 200B ACS vs 20B
RX(14) OF 2B
(Continued)

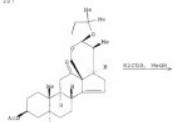


RX(15) OF 2B

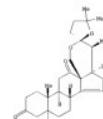


NOTE: Regioselective, stereoselective

RX(16) OF 2B



RX(15) OF 2B



NOTE: Jones reagent used step 1

1A. ASYMMETRIC T OF 2B CADDENCT COMPOUND 200B ACS vs 20B
RX(14) OF 2B
(Continued)

2B
(step 1)

1A. ASYMMETRIC T OF 2B CADDENCT COMPOUND 200B ACS vs 20B
RX(17) OF 2B
(Continued)

2B

RX(14) OF 2B

2B

NOTE: stereoselective

2B
Hg(OAc)2, NaBH4, MeOH

RX(18) OF 2B

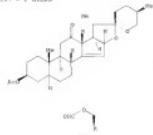
2B
Hg(OAc)2, NaBH4, MeOH

2B

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14. ANSWER 1 OF 14. CANDIDATE COMPOUND 2008 ACD vs SIRN (Continued)

RI(30) OF 201 - 2 STEPS

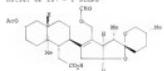


RI(19) OF 201 - 2 STEPS



NOTE: 2) Friesel-Crafts reaction, stereoselective

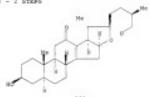
RI(30) OF 201 - 2 STEPS



1. Pd(OH)₂, MeOH/H₂O, 0°C, 1 h
2. LiAlD₄, THF, 0°C, 1 h
3. AcOH, H₂O, 1 h

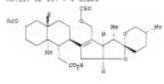
14. ANSWER 7 OF 14. CANDIDATE COMPOUND 2008 ACD vs SIRN (Continued)

RI(31) OF 201 - 2 STEPS



NOTE: 2) Friesel-Crafts reaction, stereoselective

RI(32) OF 201 - 2 STEPS



1. Pd(OH)₂, MeOH/H₂O, 0°C, 1 h
2. LiAlD₄, THF, 0°C, 1 h

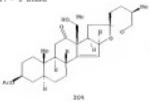
RI(33) OF 201 - 2 STEPS



NOTE: 2) Friesel-Crafts reaction, stereoselective

14. ANSWER 7 OF 14. CANDIDATE COMPOUND 2008 ACD vs SIRN (Continued)

RI(30) OF 201 - 2 STEPS

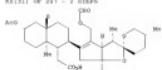


RI(30) OF 201 - 2 STEPS



NOTE: 1) Friesel-Crafts reaction, stereoselective, 2) stereoselective

RI(31) OF 201 - 2 STEPS



1. Pd(OH)₂, MeOH/H₂O, 0°C, 1 h
2. LiAlD₄, THF, 0°C, 1 h

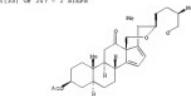
14. ANSWER 7 OF 20. CANDIDATE COMPOUND 2008 ACD vs SIRN (Continued)

RI(32) OF 201 - 2 STEPS



1. Pd(OH)₂, MeOH/H₂O, 0°C, 1 h
2. LiAlD₄, THF, 0°C, 1 h
3. MeSO₃CH₂CO₂H, 0°C, 1 h
4. NaBH₄, MeOH

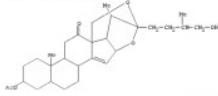
RI(33) OF 201 - 2 STEPS



NOTE: 2) stereoselective

RI(34) OF 201 - REACTION DIAGRAM NOT AVAILABLE

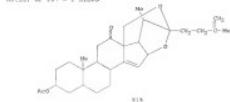
RI(35) OF 201 - 2 STEPS



1. TiCl₄, Pyridine,
CH₂Cl₂, 0°C, 1 h
2. H₂, Ni, DMF
3. DMS

1A. ASYMMETRIC T OF 3A CADDRACT. Copyright 2008 ACS on STM (Continued)

R2(30) OF 23T - 2 STEPS

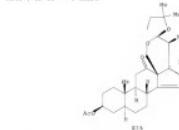


R2(30) OF 23T - REACTION DIAGRAM NOT AVAILABLE

R2(37) OF 23T - 2 STEPS



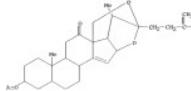
R2(37) OF 23T - 2 STEPS



NOTE: 2) regioselective, stereoselective

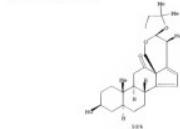
1A. ASYMMETRIC T OF 3B CADDRACT. Copyright 2008 ACS on STM (Continued)

R2(30) OF 23T - 2 STEPS



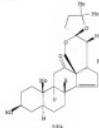
1. 1. MeAl(Me)CH₂Br,
Pd(OAc)₂
1.2. NaBH₄, MeOH
2. Ac₂O, NaOEt

R2(30) OF 23T - 2 STEPS



1A. ASYMMETRIC T OF 3A CADDRACT. Copyright 2008 ACS on STM (Continued)

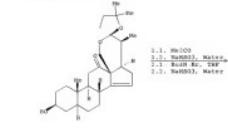
R2(30) OF 23T - 2 STEPS



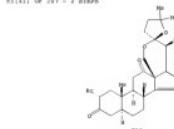
NOTE: 1) regioselective, stereoselective

1A. ASYMMETRIC T OF 3B CADDRACT. Copyright 2008 ACS on STM (Continued)

R2(41) OF 23T - 2 STEPS

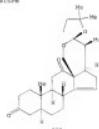


R2(41) OF 23T - 2 STEPS



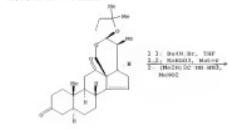
NOTE: 1) Jones reagent used stage 1; 2) stereoselective

R2(41) OF 23T - 2 STEPS



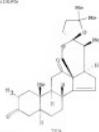
NOTE: 2) Jones reagent used stage 1

R2(41) OF 23T - 2 STEPS



SA ANSWER T OF 34 CADDRACT CONFIDENTIAL 2600 ACS ON STM (Continued)

RI(42) OF 331 - 2 STERS



NOTE: 1) stereoselective

RI(43) OF 331 - REACTION DIAGRAM NOT AVAILABLE

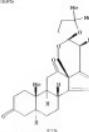
RI(44) OF 331 - 2 STERS



RI(45) OF 331 - 2 STERS

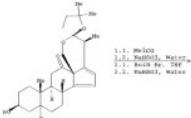
SA ANSWER T OF 34 CADDRACT CONFIDENTIAL 2600 ACS ON STM (Continued)

RI(44) OF 331 - 2 STERS

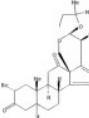


NOTE: 1) Jones reagent used stage 1

RI(45) OF 331 - 2 STERS



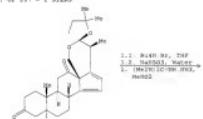
RI(45) OF 331 - 1 STERS



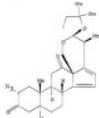
NOTE: 1) Jones reagent used stage 1, 2) stereoselective

SA ANSWER T OF 34 CADDRACT CONFIDENTIAL 2600 ACS ON STM (Continued)

RI(44) OF 331 - 2 STERS



RI(44) OF 331 - 2 STERS



NOTE: 1) stereoselective

RI(47) OF 331 - REACTION DIAGRAM NOT AVAILABLE

RI(48) OF 331 - REACTION DIAGRAM NOT AVAILABLE

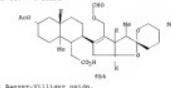
RI(49) OF 331 - REACTION DIAGRAM NOT AVAILABLE

RI(50) OF 331 - 3 STERS



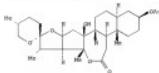
SA ANSWER T OF 34 CADDRACT CONFIDENTIAL 2600 ACS ON STM (Continued)

RI(50) OF 331 - 3 STERS



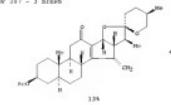
NOTE: 1) Sharpless-Kishi oxime.

RI(51) OF 331 - 3 STERS



1. PDCB10002,
DMAP
2. Pyridine, HClLi,
H2O
3. H2O
4. NaBH4, Water
5. Pd/C, MeOH/CHCl3,
CHCl3/CH3COCH3

RI(51) OF 331 - 3 STERS



1A. ANSWER 1 OF 1B CADDRACT COPYRIGHT 2000 ACD/NSN (Continued)

NS(51) OF 231 - 3 STEPS

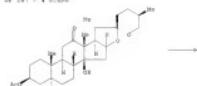


NS(51) OF 231 - 3 STEPS



NOTE: 3) Friedel-Crafts reaction, stereoselective

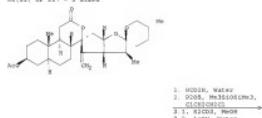
NS(51) OF 231 - 4 STEPS



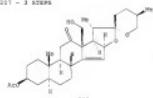
NOTE: 1) Baeyer-Villiger oxon., 2) Friedel-Crafts reaction, stereoselective

1A. ANSWER 1 OF 1B CADDRACT COPYRIGHT 2000 ACD/NSN (Continued)

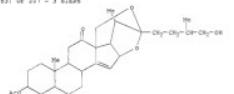
NS(52) OF 231 - 3 STEPS



NS(52) OF 231 - 3 STEPS



NS(53) OF 231 - 3 STEPS



NOTE: 2) Friedel-Crafts reaction, stereoselective, 3) stereoselective

1A. ANSWER 1 OF 1B CADDRACT COPYRIGHT 2000 ACD/NSN (Continued)

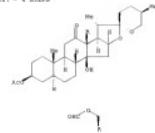
NS(53) OF 231 - 4 STEPS



NS(53) OF 231 - 4 STEPS

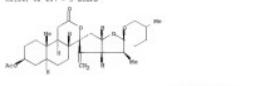


NS(53) OF 231 - 4 STEPS

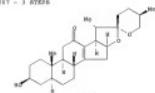


NOTE: 1) Baeyer-Villiger oxon., 2) Friedel-Crafts reaction, stereoselective

NS(54) OF 231 - 3 STEPS

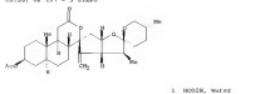


NS(54) OF 231 - 3 STEPS



NOTE: 2) Friedel-Crafts reaction, stereoselective

NS(55) OF 231 - 3 STEPS



1A. ANSWER T OF 1B CADREACT COMPOUND 2608 ACS vs STM (Continued)

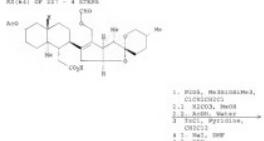
RI(42): OF 231 - 3 STEPS



RI(43): OF 231 - 3 STEPS

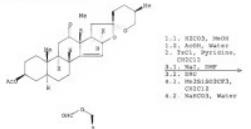


RI(44): OF 231 - 4 STEPS

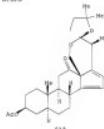


1A. ANSWER T OF 1B CADREACT COMPOUND 2608 ACS vs STM (Continued)

RI(44): OF 231 - 4 STEPS



RI(44): OF 231 - 4 STEPS

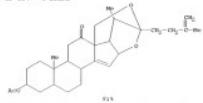


RI(47): OF 231 - REACTION DIAGRAM NOT AVAILABLE

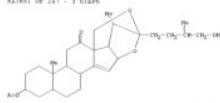
RI(48): OF 231 - REACTION DIAGRAM NOT AVAILABLE

1A. ANSWER T OF 1B CADREACT COMPOUND 2608 ACS vs STM (Continued)

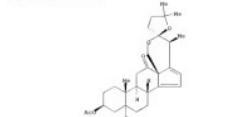
RI(44): OF 231 - 4 STEPS



RI(45): OF 231 - 3 STEPS

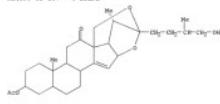


RI(46): OF 231 - 3 STEPS



1A. ANSWER T OF 1B CADREACT COMPOUND 2608 ACS vs STM (Continued)

RI(46): OF 231 - 4 STEPS

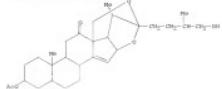


RI(47): OF 231 - 4 STEPS



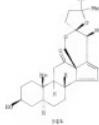
1A ANSWER T OF 1B CADDRACT COPYRIGHT 2004 ACS ON STM (Continued)

RE(70) OF 231 - 4 STEPS



1. TsCl, Pyridine,
CH₂Cl₂, 0°C
2. LiAlD₄, THF
2. LiAlD₄, CH₂Cl₂, 0°C
3. NaBH₄, MeOH
4. K₂CO₃, MeOH

RE(71) OF 231 - 4 STEPS



232

RE(72) OF 231 - 3 STEPS

1A ANSWER T OF 1A CADDRACT COPYRIGHT 2004 ACS ON STM (Continued)

RE(72) OF 231 - 3 STEPS



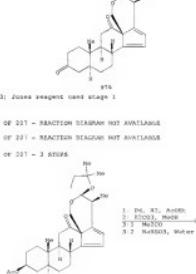
- 1.1. NaHOBnCH₂,
CH₂Cl₂
1.2. NaBH₄, MeOH
1.3. K₂CO₃, MeOH
2.1. NaBH₄, Water

RE(73) OF 231 - 3 STEPS

RE(73) OF 231 - 3 STEPS

RE(74) OF 231 - 3 STEPS

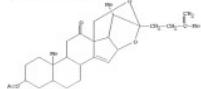
RE(75) OF 231 - 3 STEPS



1. Ph₃P, Et₂O, AcOH,
MeOH
2. LiAlD₄, THF
3. 2 M NaBH₄, MeOH
4. 2 M NaBH₄, Water

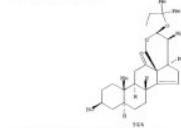
1A ANSWER T OF 1B CADDRACT COPYRIGHT 2004 ACS ON STM (Continued)

RE(71) OF 231 - 3 STEPS



1. 1. MeLi/150°/30min,
CH₂Cl₂
1.2. NaBH₄, MeOH
2. Ph₃P, AcOH
3. K₂CO₃, MeOH

RE(71) OF 231 - 3 STEPS

NOTE: 1) regiospecific, stereo-specific
2) Jones reagent used stage 1

1A ANSWER T OF 1B CADDRACT COPYRIGHT 2004 ACS ON STM (Continued)

RE(76) OF 231 - 3 STEPS



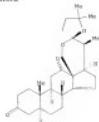
NOTE: 1) regiospecific, stereo-specific, 2) Jones reagent used stage 1



- 1.1. MeLi/150°/30min,
CH₂Cl₂
1.2. NaBH₄, Water
2. Ph₃P, AcOH
3. K₂CO₃, MeOH
4. NaBH₄, Water

1A. ANOMER 1 OF 1B CADDUCT COPROPIGMENT 2100 ACS vs STM (Continued)

RE(76) OF 211 - 4 STEPS



NOTE: 1) Enantioselective, stereoselective; 2) Jones reagent used stage 1.

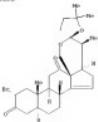
RE(77) OF 211 - 3 STEPS



1. K_2CO_3 , MeOH
- 2.1. NaBH_4
- 2.2. NaBH_4 , Water
- 2.3. NaBH_4 , THF
- 2.4. NaBH_4 , Water

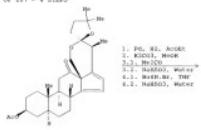
1A. ANOMER 1 OF 1B CADDUCT COPROPIGMENT 2100 ACS vs STM (Continued)

RE(77) OF 211 - 3 STEPS



NOTE: 1) Jones reagent used stage 1, 2) stereoselective

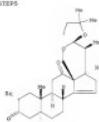
RE(78) OF 211 - 4 STEPS



1. Ph_3Si , AcOH
- 2.1. K_2CO_3 , MeOH
- 2.2. NaBH_4 , THF
- 2.3. NaBH_4 , Water
- 2.4. NaBH_4 , Water

1A. ANOMER 1 OF 1B CADDUCT COPROPIGMENT 2100 ACS vs STM (Continued)

RE(78) OF 211 - 4 STEPS



NOTE: 1) Enantioselective, stereoselective; 2) Jones reagent used stage 1.

1A. ANOMER 1 OF 1B CADDUCT COPROPIGMENT 2100 ACS vs STM (Continued)

RE(79) OF 211 - 4 STEPS



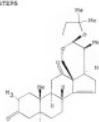
1. K_2CO_3 , MeOH
- 2.1. NaBH_4 , Water
- 2.2. NaBH_4 , THF
- 2.3. NaBH_4 , Water
- 2.4. NaBH_4 , Water

RE(79) OF 211 - 3 STEPS



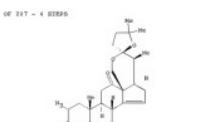
- 1.1. MeCO
- 1.2. NaBH_4 , Water
- 1.3. NaBH_4 , THF
- 1.4. NaBH_4 , Water
- 1.5. NaBH_4 , Water

RE(79) OF 211 - 3 STEPS



NOTE: 1) Jones reagent used stage 1, 2) stereoselective

RE(80) OF 211 - 4 STEPS



NOTE: 2) Jones reagent used stage 1, 3) stereoselective

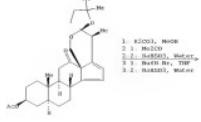
RE(81) OF 211 - FRACTION DIAGRAM NOT AVAILABLE

RE(82) OF 211 - FRACTION DIAGRAM NOT AVAILABLE

RE(83) OF 211 - FRACTION DIAGRAM NOT AVAILABLE

RE(84) OF 211 - FRACTION DIAGRAM NOT AVAILABLE

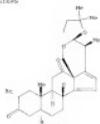
RE(85) OF 211 - 3 STEPS



1. K_2CO_3 , MeOH
- 2.1. MeCO
- 2.2. NaBH_4 , Water
- 2.3. NaBH_4 , THF
- 3.2. NaBH_4 , Water

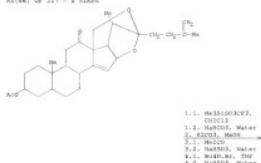
1A ASSUMED T OF 1B CANDIDATE CONFIDENTIAL 2600 ACS on STM (Continued)

RI(45) OF 231 - 3 STEPS



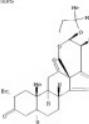
NOTE: 1) Jones reagent used stage 1, 2) stereoselective

RI(46) OF 231 - 4 STEPS



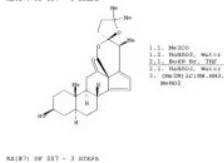
1A ASSUMED T OF 1B CANDIDATE CONFIDENTIAL 2600 ACS on STM (Continued)

RI(46) OF 231 - 4 STEPS

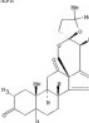


NOTE: 1) Jones reagent used stage 1, 2) stereoselective

RI(47) OF 231 - 3 STEPS



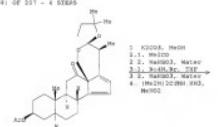
RI(47) OF 231 - 3 STEPS



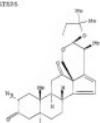
NOTE: 1) Jones reagent used stage 1, 2) stereoselective

1A ASSUMED T OF 1B CANDIDATE CONFIDENTIAL 2600 ACS on STM (Continued)

RI(48) OF 231 - 4 STEPS



RI(48) OF 231 - 4 STEPS



NOTE: 1) Jones reagent used stage 1, 2) stereoselective

RI(49) OF 231 - REACTION DIAGRAM NOT AVAILABLE

RI(50) OF 231 - REACTION DIAGRAM NOT AVAILABLE

RI(51) OF 231 - REACTION DIAGRAM NOT AVAILABLE

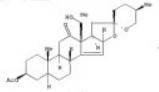
RI(52) OF 231 - REACTION DIAGRAM NOT AVAILABLE

RI(53) OF 231 - 8 STEPS

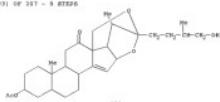


1A ASSUMED T OF 1B CANDIDATE CONFIDENTIAL 2600 ACS on STM (Continued)

RI(49) OF 231 - 5 STEPS



RI(50) OF 231 - 5 STEPS



RI(51) OF 231 - 8 STEPS



1A. ANSWER T OF 2A CANDIDATE CONFIDENTIAL 2600 ACD vs STM

(Continued)

RE(94) OF 237 - 5 STEPS



NOTE: 1) Baeyer-Villiger oxide; 2) Friedel-Crafts reaction, stereoselective

RE(95) OF 237 - 5 STEPS



RE(95) OF 237 - 5 STEPS

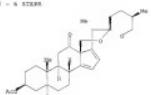


NOTE: 1) Baeyer-Villiger oxide; 2) Friedel-Crafts reaction, stereoselective

1A. ANSWER T OF 2A CANDIDATE CONFIDENTIAL 2600 ACD vs STM

(Continued)

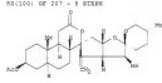
RE(96) OF 237 - 6 STEPS



NOTE: 1) Baeyer-Villiger oxide; 2) Friedel-Crafts reaction, stereoselective

RE(97) OF 237 - REACTION DIAGRAM NOT AVAILABLE

RE(100) OF 237 - 8 STEPS



RE(100) OF 237 - 8 STEPS

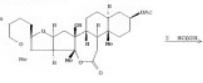


NOTE: 2) Friedel-Crafts reaction, stereoselective, 3) stereoselective

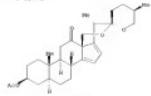
1A. ANSWER T OF 2A CANDIDATE CONFIDENTIAL 2600 ACD vs STM

(Continued)

RE(96) OF 237 - 5 STEPS



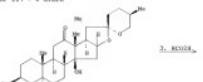
RE(96) OF 237 - 5 STEPS



NOTE: 2) Friedel-Crafts reaction, stereoselective, 3) stereoselective

RE(97) OF 237 - REACTION DIAGRAM NOT AVAILABLE

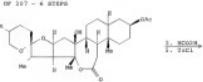
RE(98) OF 237 - 6 STEPS



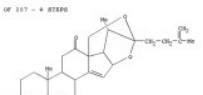
1A. ANSWER T OF 2B CANDIDATE CONFIDENTIAL 2600 ACD vs STM

(Continued)

RE(97) OF 237 - 6 STEPS



RE(101) OF 237 - 6 STEPS

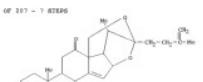


NOTE: 2) Friedel-Crafts reaction, stereoselective, 3) stereoselective

RE(102) OF 237 - 7 STEPS



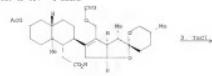
RE(103) OF 237 - 7 STEPS



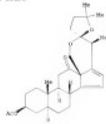
NOTE: 2) Baeyer-Villiger oxide, 3) Friedel-Crafts reaction, stereoselective, 3) stereoselective

1A ANSWER 1 OF 10 CADREACT COPYRIGHT 2008 ACS on STM (Continued)

RE(103) OF 217 - 5 STEPS

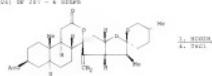


RE(103) OF 217 - 5 STEPS



NOTE: 1) Friedel-Crafts reaction, stereoselective. 2) stereoselective

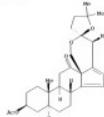
RE(104) OF 217 - 4 STEPS



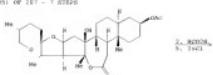
RE(104) OF 217 - 4 STEPS

1A ANSWER 1 OF 10 CADREACT COPYRIGHT 2008 ACS on STM (Continued)

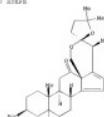
RE(104) OF 217 - 4 STEPS



RE(105) OF 217 - 7 STEPS

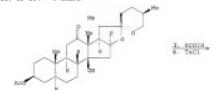


RE(105) OF 217 - 7 STEPS



1A ANSWER 1 OF 10 CADREACT COPYRIGHT 2008 ACS on STM (Continued)

RE(106) OF 217 - 6 STEPS



RE(106) OF 217 - 6 STEPS



NOTE: 1) Baeyer-Villiger Oxidation; 2) Friedel-Crafts reaction, stereoselective; 3) stereoselective

1A ANSWER 1 OF 10 CADREACT COPYRIGHT 2008 ACS on STM (Continued)

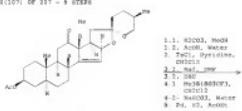
RE(107) OF 217 - 5 STEPS



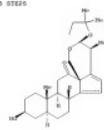
RE(108) OF 217 - 5 STEPS



RE(107) OF 217 - 5 STEPS

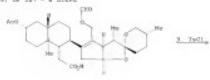


RE(109) OF 217 - 5 STEPS

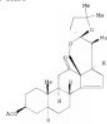


14 ANSWER T OF 10 CADRACT CONFIDENTIAL 2208 ACD-ON-SIN (Continued)

RE(110): OF 217 - 4 STEPS

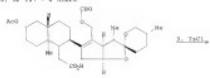


RE(110): OF 217 - 4 STEPS



NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) regioselective, stereoselective

RE(110): OF 217 - 4 STEPS

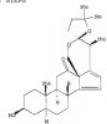


14 ANSWER T OF 14 CADRACT CONFIDENTIAL 2208 ACD-ON-SIN (Continued)

RE(111): OF 217 - 7 STEPS

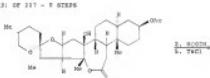


RE(111): OF 217 - 7 STEPS



NOTE: 1) Friedel-Crafts reaction, stereoselective; 3) stereoselective

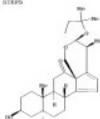
RE(111): OF 217 - 8 STEPS



RE(111): OF 217 - 8 STEPS

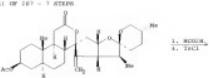
14 ANSWER T OF 10 CADRACT CONFIDENTIAL 2208 ACD-ON-SIN (Continued)

RE(111): OF 217 - 8 STEPS



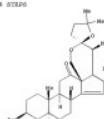
NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) stereoselective

RE(111): OF 217 - 7 STEPS

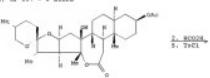
NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) regioselective, stereoselective
3) stereoselective

14 ANSWER T OF 14 CADRACT CONFIDENTIAL 2208 ACD-ON-SIN (Continued)

RE(111): OF 217 - 8 STEPS

NOTE: 1) Friedel-Crafts reaction, stereoselective; 4) stereoselective;
2) regioselective, stereoselective

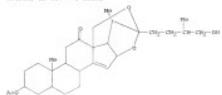
RE(111): OF 217 - 8 STEPS



NOTE: 2) Friedel-Crafts reaction, stereoselective; 5) stereoselective

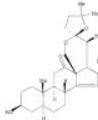
1A. ANSWER T OF 1B CADNACT CONFIDENTIAL 2600 ACD ON STM (Continued)

RE(116) OF 217 - 4 STEPS



1. TBTU, Pyridine,
CHCl₃
2. LiAlD₄, THF
3. LiAlD₄(CH₂Cl)₂→
CH₂Cl₂
4. Pd, H₂, AcOH
5. KHSO₄, MeOH

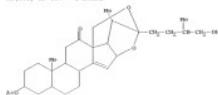
RE(116) OF 217 - 5 STEPS



NOTE: 4) regioselective, stereoselective

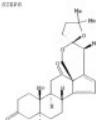
1A. ANSWER T OF 1B CADNACT CONFIDENTIAL 2600 ACD ON STM (Continued)

RE(116) OF 217 - 5 STEPS



1. TBTU, Pyridine,
CHCl₃
2. LiAlD₄, THF
3. LiAlD₄(CH₂Cl)₂→
CH₂Cl₂
4. Pd, H₂, AcOH
5. KHSO₄, MeOH

RE(116) OF 217 - 6 STEPS



NOTE: 5) Jones reagent used stage 1

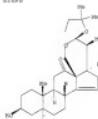
1A. ANSWER T OF 1B CADNACT CONFIDENTIAL 2600 ACD ON STM (Continued)

RE(117) OF 217 - 4 STEPS



1. TBTU

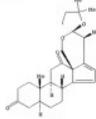
RE(117) OF 217 - 4 STEPS



NOTE: 1) stereoselective, 2) regioselective, stereoselective

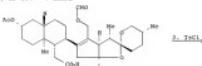
1A. ANSWER T OF 1B CADNACT CONFIDENTIAL 2600 ACD ON STM (Continued)

RE(118) OF 217 - 4 STEPS

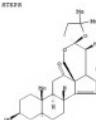


NOTE: 1) stereoselective, 4) Jones reagent used stage 1

RE(119) OF 217 - 5 STEPS



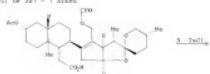
RE(119) OF 217 - 5 STEPS



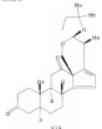
NOTE: 1) Fesol-Duffy reagent, 2) stereoselective, 3) stereoselective, 4) regioselective, stereoselective

1A ANSWER T OF 1B CADDUCT COPIRIGHT 2008 ACS vs SBN (Continued)

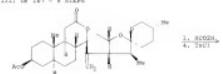
RE(120) OF 287 - 1 STEPS



RE(120) OF 287 - 7 STEPS

NOTE: 1) Friedel-Crafts reaction, stereoselective, 2) stereoselective,
3) Jones reagent used stage 1

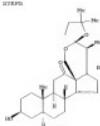
RE(121) OF 287 - 8 STEPS



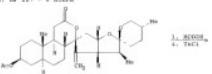
RE(121) OF 287 - 8 STEPS

1A ANSWER T OF 1B CADDUCT COPIRIGHT 2008 ACS vs SBN (Continued)

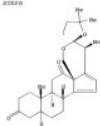
RE(121) OF 287 - 8 STEPS

NOTE: 1) Friedel-Crafts reaction, stereoselective, 3) stereoselective,
2) regioselective, stereoselective

RE(122) OF 287 - 8 STEPS



RE(122) OF 287 - 8 STEPS

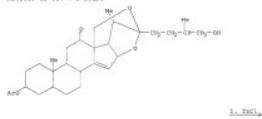
NOTE: 1) Friedel-Crafts reaction, stereoselective, 3) stereoselective,
2) Jones reagent used stage 1

RE(123) OF 287 - REACTION DIAGRAM NOT AVAILABLE

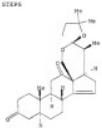
RE(124) OF 287 - REACTION DIAGRAM NOT AVAILABLE

1A ANSWER T OF 1B CADDUCT COPIRIGHT 2008 ACS vs SBN (Continued)

RE(125) OF 287 - 4 STEPS

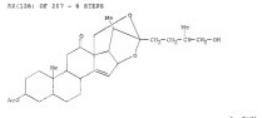


RE(125) OF 287 - 4 STEPS



NOTE: 1) regioselective, stereoselective, 4) Jones reagent used stage

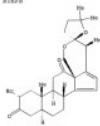
RE(126) OF 287 - 4 STEPS



RE(126) OF 287 - 4 STEPS

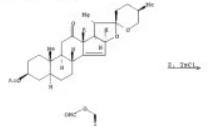
1A ANSWER T OF 1B CADDUCT COPIRIGHT 2008 ACS vs SBN (Continued)

RE(126) OF 287 - 4 STEPS

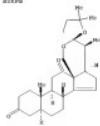


NOTE: 3) Jones reagent used stage 1, 4) stereoselective

RE(127) OF 287 - 7 STEPS



RE(127) OF 287 - 7 STEPS



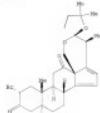
NOTE: 1) stereoselective, 3) regioselective, stereoselective, 7) Jones reagent used stage 1

SA ANSWER T OF 19 CADREACT COPRIGHT 2008 ACS ON STN (Continued)

RS(131) OF 287 - 1 STEPS

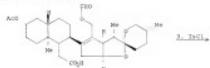


RS(131) OF 287 - 7 STEPS



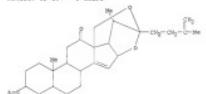
NOTE: 1) stereoselective, 2) Jones reagent used stage 1, 3) stereoselective

RS(131) OF 287 - 8 STEPS



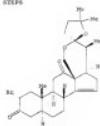
SA ANSWER T OF 28 CADREACT COPRIGHT 2008 ACS ON STN (Continued)

RS(131) OF 287 - 5 STEPS



1. LiAlD_4
2. TiCl_4
3. Pd, H_2 , Acetone
4. KEDT, MeOH
4.1. LiAlD_4
4.2. NaBH_4 , Water
4.3. LiAlD_4
5.1. NaHSO_3 , Water

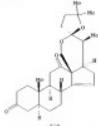
RS(131) OF 287 - 9 STEPS



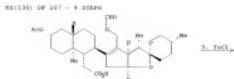
NOTE: 1) regioselective, stereoselective, 2) Jones reagent used stage 1, 3) stereoselective

SA ANSWER T OF 28 CADREACT COPRIGHT 2008 ACS ON STN (Continued)

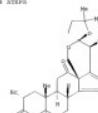
RS(131) OF 287 - 8 STEPS



NOTE: 1) Friedel-Crafts reaction, stereoselective, 2) regioselective, stereoselective, 3) Jones reagent used stage 1, 4) Jones reagent used stage 2, 5) Jones reagent used stage 3, 6) Jones reagent used stage 4, 7) Jones reagent used stage 5, 8) Jones reagent used stage 6



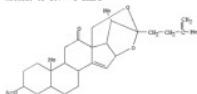
RS(131) OF 287 - 9 STEPS



NOTE: 1) Friedel-Crafts reaction, stereoselective, 2) regioselective, stereoselective, 3) Jones reagent used stage 1, 4) Jones reagent used stage 2, 5) Jones reagent used stage 3, 6) Jones reagent used stage 4, 7) Jones reagent used stage 5, 8) Jones reagent used stage 6, 9) Jones reagent used stage 7

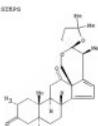
SA ANSWER T OF 28 CADREACT COPRIGHT 2008 ACS ON STN (Continued)

RS(131) OF 287 - 5 STEPS



1. LiAlD_4
2. TiCl_4
3. Pd, H_2 , Acetone
4. KEDT, MeOH
4.1. LiAlD_4
4.2. NaBH_4 , Water
4.3. LiAlD_4
5. NaBH_4 , CH_2Cl_2 , HgCl_2

RS(131) OF 287 - 6 STEPS



NOTE: 1) Jones reagent used stage 1, 2) stereoselective

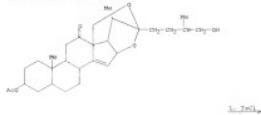
RS(131) OF 287 - 9 STEPS



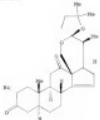
NOTE: 1) Jones reagent used stage 1, 2) Jones reagent used stage 2, 3) Jones reagent used stage 3, 4) Jones reagent used stage 4, 5) Jones reagent used stage 5, 6) Jones reagent used stage 6, 7) Jones reagent used stage 7, 8) Jones reagent used stage 8, 9) Jones reagent used stage 9

1A. ANSWER T OF 3B CANDIDATE COMPOUND 2100 ACG ON STM (Continued)

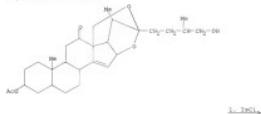
RS(125) OF 217 - V STERS



RS(126) OF 217 - T STERS

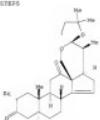
NOTE: 1) 4) regioselective, sterooselective; 2) Jones reagent used stage 1, 6) stereoselective
1, 7) stereoselective

RS(126) OF 217 - V STERS



1A. ANSWER T OF 3B CANDIDATE COMPOUND 2100 ACG ON STM (Continued)

RS(127) OF 217 - R STERS

NOTE: 1) stereoselective, 2) regioselective, sterooselective, 7) Jones
reagent used stage 1, 8) regioselective

RS(128) OF 217 - R STERS

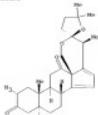


RS(129) OF 217 - R STERS

NOTE: 1) stereoselective; 4) Jones reagent used stage 1, 7)
stereoselective

1A. ANSWER T OF 3B CANDIDATE COMPOUND 2100 ACG ON STM (Continued)

RS(126) OF 217 - V STERS



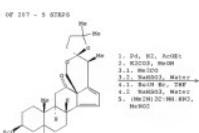
NOTE: 5) Jones reagent used stage 1, 6) stereoselective

RS(127) OF 217 - R STERS

CC(=O)CH₂CH₂CH₃

1A. ANSWER T OF 3B CANDIDATE COMPOUND 2100 ACG ON STM (Continued)

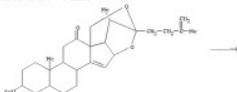
RS(128) OF 217 - S STERS

2. D4, HO, AcOH
2. K2CO₃, MeOH
3. NaBH₄, Et₂O
4. Li, ⁷LiAlD₄, Water
5. (R)-BINOL, DMAP, HATU

RS(129) OF 217 - S STERS

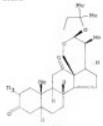
NOTE: 1) regioselective, sterooselective, 2) Jones reagent used stage
1, 8) stereoselective

RS(130) OF 217 - S STERS



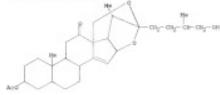
1A. ANSWER T OF 1B CADREACT COPRIGHT 2008 ACD/NSR (Continued)

RE[140]: OF 217 - 4 STEPS

NOTE: 1) regioselective, stereoselective; 2) Jones reagent used stage
3, 5) stereoselective

RE[141]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[142]: OF 217 - 4 STEPS

3- TiCl_3

RE[143]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[144]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[145]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[146]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[147]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[148]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[149]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[150]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[151]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[152]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[153]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[154]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[155]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[156]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[157]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[158]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[141]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[142]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[143]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[144]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[145]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[146]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[147]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[148]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[149]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[150]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[151]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[152]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[153]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[154]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[155]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[156]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[157]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[158]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

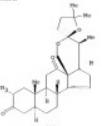
RE[140]: OF 217 - 5 STEPS

NOTE: 1) Koenigs-Knorr oxime; 2) Friedel-Crafts reaction,
stereoselective; 3) stereoselective; 4) regioselective,
stereoselective

RE[141]: OF 217 - 5 STEPS

1A. ANSWER T OF 1B CADREACT COPRIGHT 2008 ACD/NSR (Continued)

RE[142]: OF 217 - 5 STEPS

NOTE: 1) regioselective, stereoselective; 2) Jones reagent used stage
3, 5) stereoselective

RE[143]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[144]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[145]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[146]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[147]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[148]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[149]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[150]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[151]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[152]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[153]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[154]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[155]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[156]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[157]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE[158]: OF 217 - REACTION DIAGRAM NOT AVAILABLE

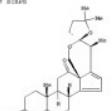
1A. ANSWER T OF 1B CADREACT COPRIGHT 2008 ACD/NSR (Continued)

RE[140]: OF 217 - 5 STEPS

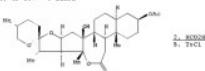


1A. ANSWER T OF 1B CADREACT COPRIGHT 2008 ACD/NSR (Continued)

RE[141]: OF 217 - 5 STEPS

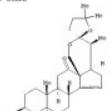
NOTE: 1) Koenigs-Knorr oxime; 2) Friedel-Crafts reaction,
stereoselective

RE[142]: OF 217 - 5 STEPS



NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) stereoselective

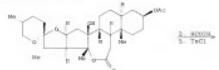
RE[143]: OF 217 - 5 STEPS



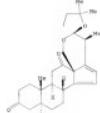
NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) stereoselective

1A ANSWER 1 OF 10 CADNETIC COMPOUND 2100 ACID ON STM (Continued)

RI(141) OF 217 - 5 STEPS



RI(142) OF 217 - 8 STEPS



NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) stereoselective; 3) Jones reagent used stage 1.

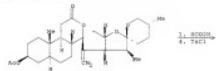
RI(143) OF 217 - 10 STEPS



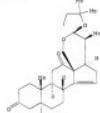
NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) stereoselective; 3) Jones reagent used stage 1.

1A ANSWER 1 OF 1A CADNETIC COMPOUND 2100 ACID ON STM (Continued)

RI(145) OF 217 - 5 STEPS

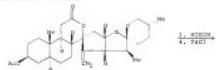


RI(146) OF 217 - 8 STEPS



NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) stereoselective; 3) Jones reagent used stage 1.

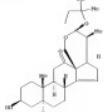
RI(146) OF 217 - 10 STEPS



NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) stereoselective; 3) Jones reagent used stage 1.

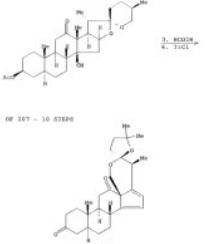
1A ANSWER 1 OF 1B CADNETIC COMPOUND 2100 ACID ON STM (Continued)

RI(143) OF 217 - 10 STEPS



NOTE: 1) Baeyer-Villiger oxon. 4) Friedel-Crafts reaction, stereoselective; 5) stereoselective; 6) regioselective.

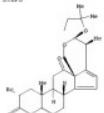
RI(144) OF 217 - 10 STEPS



NOTE: 1) Baeyer-Villiger oxon. 4) Friedel-Crafts reaction, stereoselective; 5) stereoselective, 10) Jones reagent used stage 1.

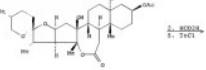
1A ANSWER 1 OF 1B CADNETIC COMPOUND 2100 ACID ON STM (Continued)

RI(144) OF 217 - 10 STEPS

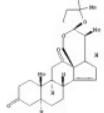


NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) stereoselective; 3) Jones reagent used stage 1.

RI(145) OF 217 - 10 STEPS



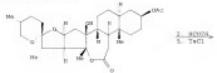
RI(146) OF 217 - 10 STEPS



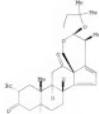
NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) stereoselective; 3) Jones reagent used stage 1.

1A ANSWER T OF 1B CADDRACT CONFIDENTIAL 2200 ACD ON STM (Continued)

RI(144) OF 287 - 10 STEPS



RI(144) OF 287 - 10 STEPS



NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) acetonitrile; 3) Jones reagent used stage I, II; acetonitrile;

4) Jones reagent used stage I, III; acetonitrile

RI(144) OF 287 - 11 STEPS

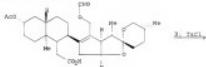


NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) acetonitrile;

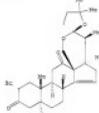
3) Jones reagent used stage I, III; acetonitrile

1A ANSWER T OF 1A CADDRACT CONFIDENTIAL 2200 ACD ON STM (Continued)

RI(171) OF 287 - 9 STEPS



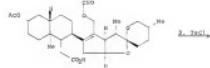
RI(171) OF 287 - 9 STEPS



NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) stereoselective; 3) Jones reagent used stage I, II; stereoselective

4) stereoselective

RI(172) OF 287 - 9 STEPS



RI(173) OF 287 - 10 STEPS

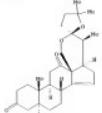


NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) stereoselective; 3) Jones reagent used stage

I, II; stereoselective

1A ANSWER T OF 1B CADDRACT CONFIDENTIAL 2200 ACD ON STM (Continued)

RI(166) OF 287 - 11 STEPS

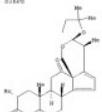


NOTE: 1) Baeyer-Villiger oxonolysis; 2) Friedel-Crafts reaction, stereoselective; 3) stereoselective; 4) Jones reagent used stage I, II; stereoselective

RI(170) OF 287 - 11 STEPS



RI(170) OF 287 - 11 STEPS

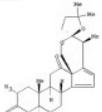


NOTE: 1) Baeyer-Villiger oxonolysis; 2) Friedel-Crafts reaction, stereoselective; 3) Jones reagent used stage I, II; stereoselective

4) Jones reagent used stage I, III; stereoselective

1A ANSWER T OF 1B CADDRACT CONFIDENTIAL 2200 ACD ON STM (Continued)

RI(173) OF 287 - 10 STEPS

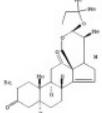


NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) Jones reagent used stage I, II; stereoselective

RI(173) OF 287 - 10 STEPS



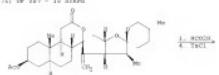
RI(173) OF 287 - 10 STEPS



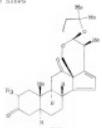
NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) Jones reagent used stage I, II; stereoselective

1A ANSWER T OF 1B CADRACT CONFIDENTIAL 2008 ACS ON STM (Continued)

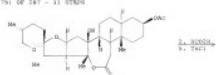
RE(174) OF 287 - 10 STEPS



RE(174) OF 287 - 10 STEPS

NOTE: 2) Friedel-Crafts reaction, stereoselective, 3) stereoselective,
4) Jones reagent used stage 1, 5) Jones reagent used stage
1, 6) LiCl

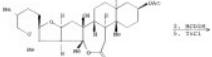
RE(174) OF 287 - 11 STEPS



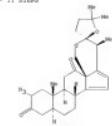
RE(174) OF 287 - 11 STEPS

NOTE: 2) Friedel-Crafts reaction, stereoselective, 3) stereoselective,
4) regioselective, stereoselective, 10) Jones reagent used stage
1, 11) LiCl

RE(176) OF 287 - 11 STEPS



RE(176) OF 287 - 11 STEPS

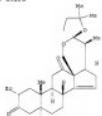
NOTE: 2) Friedel-Crafts reaction, stereoselective, 3) stereoselective,
4) Jones reagent used stage 1, 5) Jones reagent used stage
1, 6) LiCl

1A ANSWER T OF 1B CADRACT CONFIDENTIAL 2008 ACS ON STM (Continued)

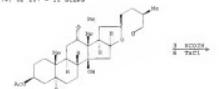
RE(177) OF 287 - 10 STEPS



RE(177) OF 287 - 10 STEPS

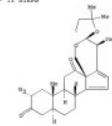
NOTE: 1) Swern-Villiger oxidation, 2) Friedel-Crafts reaction,
stereoselective, 3) stereoselective, 4) regioselective,
5) Jones reagent used stage 1, 6)
stereoselective

RE(179) OF 287 - 11 STEPS



1A ANSWER T OF 1B CADRACT CONFIDENTIAL 2008 ACS ON STM (Continued)

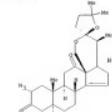
RE(179) OF 287 - 11 STEPS

NOTE: 1) Swern-Villiger oxidation, 2) Friedel-Crafts reaction,
stereoselective, 3) stereoselective, 10) Jones reagent used
stage 1, 11) LiCl

RE(179) OF 287 - 9 STEPS

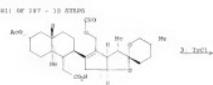


RE(179) OF 287 - 9 STEPS

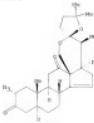
NOTE: 2) stereoselective, 3) stereoselective, stereoselective, 7) Jones
reagent used stage 1, 8) stereoselective

1A ANSWER 7 OF 1B CADDRACT COMPENDIUM 2000 ACS ON STN (Continued)

RE(180) OF 217 - 10 STEPS



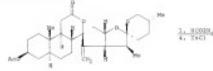
RE(181) OF 217 - 10 STEPS



NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) stereoselective; 3) Jones reagent used stage 1, 10 stereoselective
4) regioselective, stereoselective; 5) Jones reagent used stage 1, 10 stereoselective

RE(182) OF 217 - REACTION DIAGRAM NOT AVAILABLE

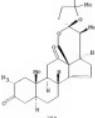
RE(183) OF 217 - 11 STEPS



RE(184) OF 217 - 11 STEPS

1A ANSWER 7 OF 1B CADDRACT COMPENDIUM 2000 ACS ON STN (Continued)

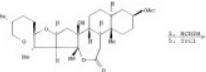
RE(185) OF 217 - 11 STEPS



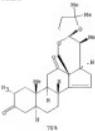
NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) regioselective, stereoselective; 3) Jones reagent used stage 1, 10 stereoselective

RE(186) OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE(187) OF 217 - 11 STEPS



RE(188) OF 217 - 11 STEPS



NOTE: 1) Friedel-Crafts reaction, stereoselective; 2) regioselective, stereoselective; 3) Jones reagent used stage 1, 10 stereoselective

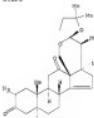
RE(189) OF 217 - REACTION DIAGRAM NOT AVAILABLE

1A ANSWER 7 OF 1B CADDRACT COMPENDIUM 2000 ACS ON STN (Continued)

RE(190) OF 217 - 12 STEPS



RE(191) OF 217 - 12 STEPS



NOTE: 1) Swern-Villiger reaction, 2) Friedel-Crafts reaction, stereoselective; 3) stereoselective; 4) regioselective, stereoselective; 5) Jones reagent used stage 1, 10 stereoselective

RE(192) OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE(193) OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE(194) OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE(195) OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE(196) OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE(197) OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE(198) OF 217 - REACTION DIAGRAM NOT AVAILABLE

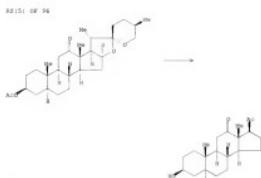
RE(199) OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE(200) OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE(201) OF 217 - REACTION DIAGRAM NOT AVAILABLE

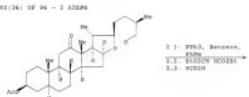
RE(202) OF 217 - REACTION DIAGRAM NOT AVAILABLE

RE(203) OF 217 - REACTION DIAGRAM NOT AVAILABLE



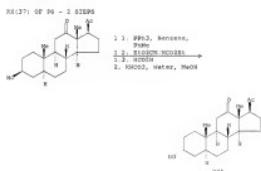
2023 RELEASE UNDER E.O. 14176

16 ANSWER 3 OF 31 CASPERACT. COPYRIGHT 2008 ACT, INC.



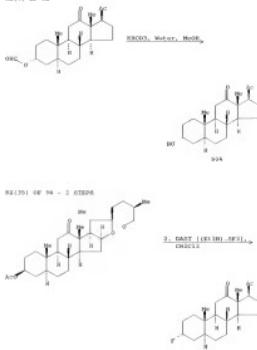
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16 ADDRESS E OF THE GRANTANT SENTIMENT 1150 APR 08 2010 (2015)

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ISSN: 2234-740X MARCH 2010

14 ANSWER 3 OF THE ENGINEACT. ©COPYRIGHT 2008 NCIS OR GTS (Continued)

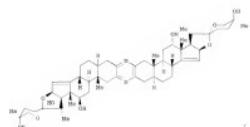
ISSN(2081) 087-28 - 3-5



ISSN: 2155-2555 36(10)

RE-CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS REQUEST
ALL CITATIONS AVAILABLE IN THE RE FORMAT

1A ASHNER 9 OF 26 CADREACT CORNICKRIGHT 2608 ACS on STM
 AS 130-1710 CALIFORNIA
 12 JOURNAL OF THE AMERICAN CHEMICAL SOCIETY
 13 LEE, SEUNGHO; PARK, HYEON
 14 DEPARTMENT OF CHEMISTRY, PINEYWOODS UNIVERSITY, WEST LAFAYETTE, IN, 47907, USA
 15 ORGANIC LETTERS (2001), 3(12), 317-318
 16 DOI: 10.1016/j.orglet.2001.09.030
 17 PUBLICATION DATE (Web Edition): NOV 20, 2001
 18 American Chemical Society
 19 © 2001
 20 English



AS: Sterane, acetate was converted to sterane M (II) in 24% conversion with an average yield per operation (IV). The overall linear yield was 12%. This confirmed I as the corrected structure for sterane M by total synthesis.



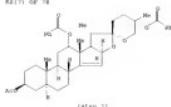
1A ASHNER 9 OF 26 CADREACT CORNICKRIGHT 2608 ACS on STM (Continued)

RI(X) OF 78



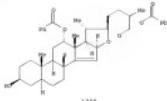
NOTE: Same route...

RI(X) OF 78



J. KIMURA, YOSHIO, Matsuda,
 S. SHIBATA, Matsuda

RI(X) OF 78



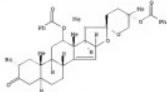
1A ASHNER 9 OF 26 CADREACT CORNICKRIGHT 2608 ACS on STM (Continued)

RI(X) OF 78



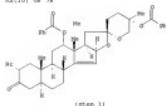
1A ASHNER 9 OF 26 CADREACT CORNICKRIGHT 2608 ACS on STM (Continued)

RI(X) OF 78



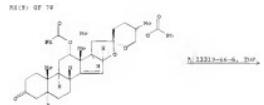
NOTE: other product also detected

RI(X) OF 78

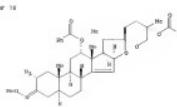


1. DMF(DCPOB)(OBn)₂,
 2. NaBH₄, 0°C, 1h
 3. NaBH₄-CHCl₃, Pyridine

RI(X) OF 78



RI(X) OF 78



1A. ASSEMBLY 1 OF 20 CADDRACT. Copyright 2008 ACD/Chem3D Pro (Continued)

RS(11) OF 78



Ph3P, MeOH, THF

RS(11) OF 78

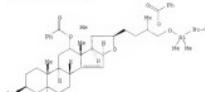


E14

NOTE: Stereocenters reduced.

RS(12) OF 78 - REACTANT DIAGRAM NOT AVAILABLE

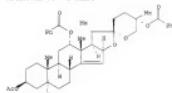
RS(14) OF 78 - 2 STEPS



1. 1. Pd/C-H2O, CHCl3
1. 2. NaBH4, Water
1.3. 1. LiAlD4, THF
Cyclization,
2. TFA, CHCl3
2.2. NaBH4, Water

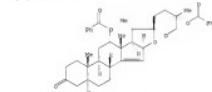
1A. ASSEMBLY 9 OF 20 CADDRACT. Copyright 2008 ACD/Chem3D Pro (Continued)

RS(14) OF 78 - 2 STEPS



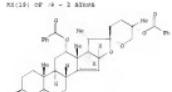
1. 1. NaBH4, MeOH,
Water
1.2. NaBH4, Water
1.3. 1. LiAlD4, THF
Cyclization,
2. TFA, CHCl3
2.2. NaBH4, Water

RS(14) OF 78 - 2 STEPS



NOTE: 2) mol. sieves used

RS(15) OF 78 - 2 STEPS



1. 1. NaBH4, MeOH,
Water
1.2. NaBH4, Water
1.3. 1. LiAlD4, THF
Cyclization,
2. TFA, CHCl3
2.2. NaBH4, Water

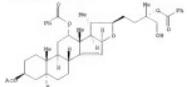
1A. ASSEMBLY 9 OF 20 CADDRACT. Copyright 2008 ACD/Chem3D Pro (Continued)

RS(16) OF 78 - 2 STEPS

STANOLONE
78

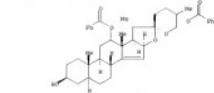
NOTE: 2) Stereo centers.

RS(17) OF 78 - 2 STEPS



1.1. 1. Pd/C-H2O, CHCl3
Cyclization
1.2. 1. LiAlD4, THF
2.1. K2CO3, MeOH,
CHCl3
2.2. NaBH4, Water

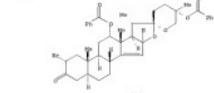
RS(18) OF 78 - 2 STEPS



NOTE: 1) Stereocenters reduced.

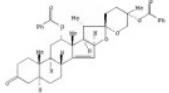
1A. ASSEMBLY 9 OF 20 CADDRACT. Copyright 2008 ACD/Chem3D Pro (Continued)

RS(19) OF 78 - 2 STEPS



NOTE: 1) mol. sieves used, 2) other product also detected

RS(20) OF 78 - 2 STEPS



1. 1. LiAlD4, THF
1.2. 1. LiAlD4, THF
2.1. K2CO3, MeOH,
CHCl3, Pyridine

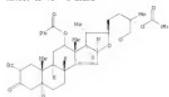
RS(20) OF 78 - 2 STEPS



NOTE: 1) other product also detected

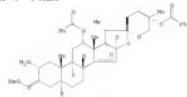
1A. ANNOTN 1 OF 1B. CADDRACT. COPYRIGHT 1998 ACS OR STM (Continued)

RE(11) OF 74 - 2 STEPS



- 1.1. NaBH_4 (20:90),
MeOH
1.2. HgCl_2 ,
CHCl₃
1.3. NaBH_4 , Pyridine,
1. MeOH, Water, THF

RE(11) OF 74 - 2 STEPS



NOTE: 2) Dehydrogenation reaction.

RE(11) OF 74 - REACTION DIAGRAM NOT AVAILABLE

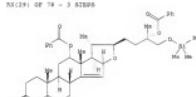
RE(11) OF 74 - REACTION DIAGRAM NOT AVAILABLE

1A. ANNOTN 2 OF 1B. CADDRACT. COPYRIGHT 1998 ACS OR STM (Continued)

RE(11) OF 74 - 4 STEPS

NOTE: 2) esteromeric, other isomer also detected, overall
yield:74% for diastereomers, 53:10 (2Sb1):(2Rb1); 3) Sauer oxime.

RE(12) OF 74 - 3 STEPS



- 1.1. NaBH_4 , CHCl₃
1.2. NaBH_4 , Water
1.3. HgCl_2 ,
CHCl₃
1.4. NaBH_4 , Water
1.5. HgCl_2 , Water
1.6. NaBH_4 , Water

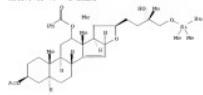
RE(12) OF 74 - 3 STEPS



NOTE: 2) Sauer oxime.

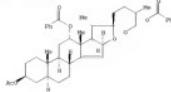
1A. ANNOTN 3 OF 1B. CADDRACT. COPYRIGHT 1998 ACS OR STM (Continued)

RE(12) OF 74 - 3 STEPS



- 1.1. NaBH_4 ,
CHCl₃-DMSO, Et₂O, 10%
1.2. NaBH_4 ,
CHCl₃-DMSO, Et₂O, 10%
1.3. HgCl_2 ,
CHCl₃-DMSO, Et₂O, 10%
1.4. NaBH_4 ,
CHCl₃-DMSO, Et₂O, 10%

RE(12) OF 74 - 3 STEPS

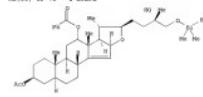
NOTE: 1) stereoselective, other isomer also detected, overall
yield:74% for diastereomers, 53:10 (2Sb1):(2Rb1); 3) Sauer oxime.

RE(12) OF 74 - 4 STEPS



1A. ANNOTN 4 OF 1B. CADDRACT. COPYRIGHT 1998 ACS OR STM (Continued)

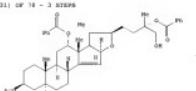
RE(12) OF 74 - 4 STEPS



RE(12) OF 74 - 4 STEPS

NOTE: 1) stereoselective, other isomer also detected, overall
yield:74% for diastereomers, 53:10 (2Sb1):(2Rb1); 3) Sauer oxime.

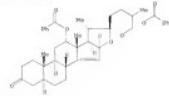
RE(12) OF 74 - 3 STEPS



NOTE: 2) Sauer oxime.

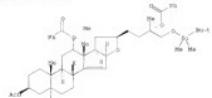
1A. ANSWER 1 OF 1B. CADDRACT. COMPILED BY ACS ON STM (Continued)

R2(11) OF 78 - 3 STEPS



NOTE: 1) Sieve used; 2) mol. sieves used.

R2(12) OF 78 - 4 STEPS



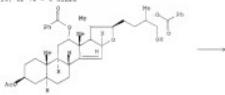
R2(13) OF 78 - 4 STEPS

1. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
2. 1. H_2O_2 , Water
3. 1. Pb(OAc)_4 , CHCl_3
2. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
3. 1. H_2O_2 , Water
4. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
5. 1. H_2O_2 , Water
6. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
7. 1. H_2O_2 , Water
8. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
9. 1. H_2O_2 , Water
10. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3

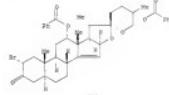
1. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
2. 1. H_2O_2 , Water
3. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
4. 1. H_2O_2 , Water
5. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
6. 1. H_2O_2 , Water
7. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
8. 1. H_2O_2 , Water
9. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
10. 1. H_2O_2 , Water
11. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3

1A. ANSWER 2 OF 1B. CADDRACT. COMPILED BY ACS ON STM (Continued)

R2(14) OF 78 - 4 STEPS

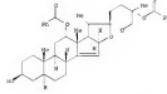


R2(15) OF 78 - 4 STEPS



NOTE: 1) Sieve used; 2) mol. sieves used; 3) other product also detected.

R2(16) OF 78 - 4 STEPS



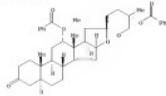
1. 1. $\text{NaBH}_4 \cdot \text{LiCl}$,
 CHCl_3
2. 1. H_2O_2 , Water
3. 1. Pb(OAc)_4 , CHCl_3
2. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
3. 1. H_2O_2 , Water
4. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3

1. 1. $\text{NaBH}_4 \cdot \text{LiCl}$,
 CHCl_3
2. 1. H_2O_2 , Water
3. 1. Pb(OAc)_4 , CHCl_3
2. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
3. 1. H_2O_2 , Water
4. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3

1A. ANSWER 3 OF 1B. CADDRACT. COMPILED BY ACS ON STM (Continued)

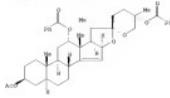
1A. ANSWER 3 OF 1B. CADDRACT. COMPILED BY ACS ON STM (Continued)

R2(11) OF 78 - 4 STEPS



NOTE: 1) Sieve used; 2) mol. sieves used.

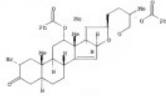
R2(12) OF 78 - 3 STEPS



1. 1. $\text{KCNH}_2 \cdot \text{H}_2\text{O}$, MeOH
2. 1. H_2O_2 , Water
3. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
2. 1. H_2O_2 , Water
3. 1. $\text{KCNH}_2 \cdot \text{H}_2\text{O}$, MeOH
4. 1. H_2O_2 , Water
5. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3

1. 1. $\text{KCNH}_2 \cdot \text{H}_2\text{O}$, MeOH
2. 1. H_2O_2 , Water
3. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3
2. 1. H_2O_2 , Water
3. 1. $\text{KCNH}_2 \cdot \text{H}_2\text{O}$, MeOH
4. 1. H_2O_2 , Water
5. 1. $\text{NaBH}_4 \cdot \text{LiCl}$, CHCl_3

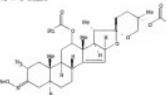
R2(13) OF 78 - 3 STEPS



NOTE: 1) mol. sieves used; 2) other product also detected.

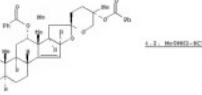
1A. ANSWER 3 OF 1B. CADDRACT. COMPILED BY ACS ON STM (Continued)

R2(14) OF 78 - 4 STEPS



NOTE: 1) mol. sieves used; 2) other product also detected.

R2(15) OF 78 - 4 STEPS



NOTE: 1) mol. sieves used; 2) other product also detected.

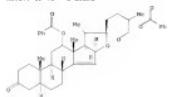
R2(16) OF 78 - 4 STEPS



NOTE: 1) mol. sieves used; 2) other product also detected.

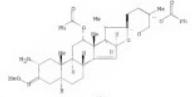
1A. ANSWER 1 OF 10 CADREACT COPENHAGEN 2200 ACS ON SBN (Continued)

RI(12): OF 78 - 3 STERS

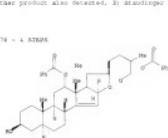


1. NaBH_4 (94-96%, THF)
2. HgCl_2 (90%, Et₂O)
3. NaBH_4 (90%, MeOH, THF)

RI(17): OF 78 - 3 STERS



RI(24): OF 78 - 3 STERS



RI(31): OF 78 - 4 STERS

1A. ANSWER 9 OF 10 CADREACT COPENHAGEN 2200 ACS ON SBN (Continued)

RI(13): OF 78 - 4 STERS



RI(13): OF 78 - 4 STERS



RI(26): 2) MnO_2 (silver wire), 2) Other product also detected, A1
Stannous reduction

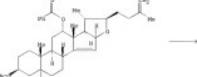
RI(29): OF 78 - REACTION DIAGRAM NOT AVAILABLE

RI(40): OF 78 - REACTION DIAGRAM NOT AVAILABLE

RI(41): OF 78 - REACTION DIAGRAM NOT AVAILABLE

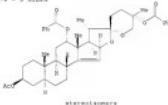
RI(42): OF 78 - REACTION DIAGRAM NOT AVAILABLE

RI(43): OF 78 - 5 STERS



1A. ANSWER 9 OF 10 CADREACT COPENHAGEN 2200 ACS ON SBN (Continued)

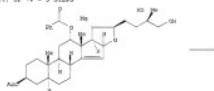
RI(42): OF 78 - 5 STERS



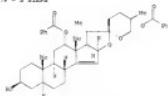
stereoisomers

RI(28): 1) Stereoselective, other isomer also detected, overall
yield=94% for diastereomer, 51:10 (15R):(15S), 31
for diastereomer, 53:10 (15R):(15S), 31 Advanced column,
RI(37): 1) Stereoselective, other isomer also detected, overall
yield=94% for diastereomer, 53:10 (15R):(15S), 31 Advanced column,

RI(44): OF 78 - 5 STERS



RI(44): OF 78 - 5 STERS

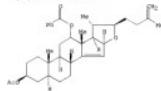


RI(44)

RI(28): 1) Stereoselective, other isomer also detected, overall
yield=94% for diastereomer, 51:10 (15R):(15S), 31 Advanced column.

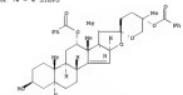
1A. ANSWER 9 OF 10 CADREACT COPENHAGEN 2200 ACS ON SBN (Continued)

RI(44): OF 78 - 6 STERS

2. LiAlD_5HCl

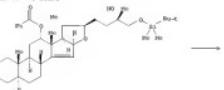
3. Boronic analysis 0.1-0.0

RI(45): OF 78 - 6 STERS



RI(26): 1) Stereoselective, other isomer also detected, overall
yield=94% for diastereomer, 53:10 (15R):(15S), 31
for diastereomer, 53:10 (15R):(15S), 31 Advanced column,
RI(37): 1) Stereoselective, other isomer also detected, overall
yield=94% for diastereomer, 53:10 (15R):(15S), 31 Advanced column.

RI(46): OF 78 - 6 STERS



RI(46)

1A. ANSWER 4 OF 1B. CADDRACT CONFIDENTIAL 2508 ACS ON S7N (Continued)

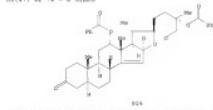


NOTE: 1) stereoselective, other isomer also detected, overall yield=68% for diastereomeric, 59:10 (ESI):[ESI]; 3) acetate added; 4) mol. sieves used.

RI(44): OF 7A - 5 ACETATE



RI(44): OF 7A - 6 ACETATE



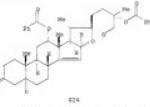
NOTE: 1) stereoselective, other isomer also detected, overall yield=68% for diastereomeric, 59:10 (ESI):[ESI]; 4) acetate added; 4) mol. sieves used.

1A. ANSWER 5 OF 1B. CADDRACT CONFIDENTIAL 2508 ACS ON S7N (Continued)

RI(44): OF 7A - 5 ACETATE

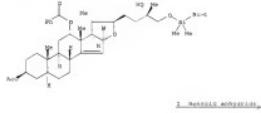
- 1.) Me3-BzCO, 0.02M
- 2.) NaBH4, Water
- 3.) 1. H2O2, 30%, EtOH
- 4.) Cyclohexane
- 5.) 1. H2O2, 30%, EtOH
- 6.) 1. H2O2, 30%, EtOH
- 7.) 1. H2O2, 30%, EtOH
- 8.) 1. H2O2, 30%, EtOH
- 9.) 1. H2O2, 30%, EtOH
- 10.) 1. H2O2, 30%, EtOH

RI(44): OF 7A - 6 ACETATE



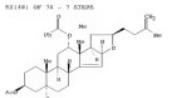
NOTE: 1) Stereospecific, At mol. sieves used, At other product also detected.

RI(50): OF 7A - 6 ACETATE



7A-*c* (Acetone, Acetone-D3)

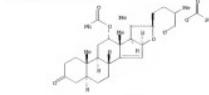
1A. ANSWER 5 OF 1B. CADDRACT CONFIDENTIAL 2508 ACS ON S7N (Continued)



2-*t*-Butyldimethyl

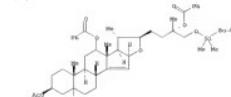
3-*t*-Butyloxymethyl

RI(44): OF 7B - 7 STERS



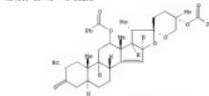
NOTE: 1) stereoselective, other isomer also detected, overall yield=68% for diastereomeric, 59:10 (ESI):[ESI]; 3) acetate added; 4) mol. sieves used; 5) acetone added; 6) acetone added; 7) mol. sieves used.

RI(44): OF 7B - 5 STERS



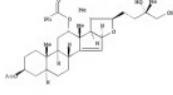
1A. ANSWER 5 OF 1B. CADDRACT CONFIDENTIAL 2508 ACS ON S7N (Continued)

RI(44): OF 7B - 6 STERS



NOTE: 1) stereoselective, other isomer also detected, overall yield=68% for diastereomeric, 59:10 (ESI):[ESI]; 3) acetone added; 4) mol. sieves used; 5) other product also detected.

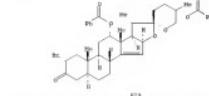
RI(51): OF 7B - 7 STERS



2-*t*-Butyldimethyl

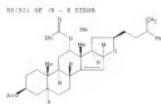
3-*t*-Butyloxymethyl

RI(51): OF 7B - 5 STERS

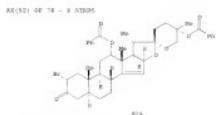


NOTE: 1) stereoselective, other isomer also detected, overall yield=68% for diastereomeric, 59:10 (ESI):[ESI]; 3) acetone added; 4) mol. sieves used; 5) other product also detected.

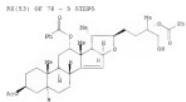
1A. ASYMMETRIC 1 OF 20 CADDRACT COPROPHAGIC 2208 ACS ON STM (Continued)



1. $\text{LiAlD}_5\text{Ph}_2\text{Cl}$
2. $\text{Be(OEt)}_2\text{H}_2\text{O}$

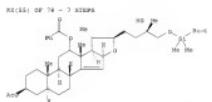


NOTE: 1) stereochemical, other isomer also detected, overall yield=47% for diastereomers, 59-10 (156)-156, 3) mol. sieves used, 4) other product also detected

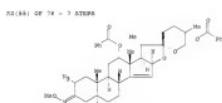


1. 1. $\text{Be(OEt)}_2\text{H}_2\text{O}$

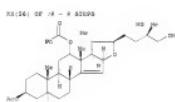
1A. ASYMMETRIC 1 OF 20 CADDRACT COPROPHAGIC 2208 ACS ON STM (Continued)



1. $\text{Be(OEt)}_2\text{H}_2\text{O}$
2. $\text{LiAlD}_5\text{Ph}_2\text{Cl}$



NOTE: 1) stereochemical, other isomer also detected, overall yield=47% for diastereomers, 59-10 (156)-156, 3) mol. sieves used, 4) other product also detected

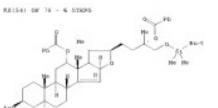


1. $\text{LiAlD}_5\text{Ph}_2\text{Cl}$
2. $\text{Be(OEt)}_2\text{H}_2\text{O}$

1A. ASYMMETRIC 9 OF 20 CADDRACT COPROPHAGIC 2208 ACS ON STM (Continued)

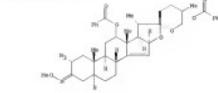


NOTE: 1) diene oxide, 2) mol. sieves used, 4) other product also detected



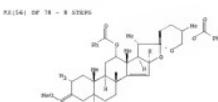
1. 1. $\text{Be(OEt)}_2\text{H}_2\text{O}$

1A. ASYMMETRIC 9 OF 20 CADDRACT COPROPHAGIC 2208 ACS ON STM

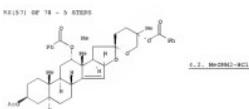


NOTE: 2) diene oxide, 4) mol. sieves used, 5) other product also detected

1A. ASYMMETRIC 9 OF 20 CADDRACT COPROPHAGIC 2208 ACS ON STM (Continued)

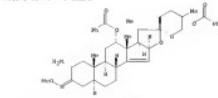


NOTE: 3) diene oxide, other isomer also detected, overall yield=47% for diastereomers, 59-10 (156)-156, 2) mol. sieves used, 4) other product also detected



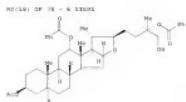
1. 1. $\text{Be(OEt)}_2\text{H}_2\text{O}$

1A. ASYMMETRIC 9 OF 20 CADDRACT COPROPHAGIC 2208 ACS ON STM



NOTE: 2) mol. sieves used, 3) other product also detected, 5) diene oxide

1A. ADDITION OF 1B TO CROSSLINK COMPOUND 2000 ACS ON STM (Continued)

T₁, T₂ = MeOH/CH₂Cl₂

R21(48) OF 78 - 4 STEPS

52: 1. $\text{C}_6\text{H}_5\text{COCl}$, 2. NaBH_4 , 3. $\text{CH}_2=\text{CHCH}_2\text{COCl}$

NOTE: 1) Source: oxime, 31 mol. sleeves used. 2) other product, 41 mol. detected. 3) 1D HNMR reduction

R21(49) OF 78 - 7 STEPS

53: 1. $\text{C}_6\text{H}_5\text{COCl}$, 2. NaBH_4 , 3. $\text{CH}_2=\text{CHCH}_2\text{COCl}$

T₁, T₂ = MeOH/CH₂Cl₂

1A. ADDITION OF 1B TO CROSSLINK COMPOUND 2000 ACS ON STM (Continued)

R21(50) OF 78 - REACTION DIAGRAM NOT AVAILABLE

R21(51) OF 78 - REACTION DIAGRAM NOT AVAILABLE

R21(52) OF 78 - REACTION DIAGRAM NOT AVAILABLE

R21(53) OF 78 - REACTION DIAGRAM NOT AVAILABLE

R21(54) OF 78 - REACTION DIAGRAM NOT AVAILABLE

R21(55) OF 78 - 9 STEPS

54: 1. $\text{C}_6\text{H}_5\text{COCl}$, 2. NaBH_4 , 3. $\text{CH}_2=\text{CHCH}_2\text{COCl}$

T₁ = $\text{C}_6\text{H}_5\text{COCl}$
T₂ = MeOH/CH₂Cl₂

R21(49) OF 78 - 5 STEPS

55: 1. $\text{C}_6\text{H}_5\text{COCl}$, 2. NaBH_4 , 3. $\text{CH}_2=\text{CHCH}_2\text{COCl}$

NOTE: 1) $\text{C}_6\text{H}_5\text{COCl}$, other isomer also detected, overall
yields for diastereomers, 39-40 (18%), 31
mol. sleeves used. 2) NaBH_4 , 10 mol. yield=87%
for diastereomers, 39-40 (15%), 31 mol. source: 71 mol.
sleeves used. 3) other product also obtained

1A. ADDITION OF 1B TO CROSSLINK COMPOUND 2000 ACS ON STM (Continued)

56: 1. $\text{C}_6\text{H}_5\text{COCl}$, 2. NaBH_4 , 3. $\text{CH}_2=\text{CHCH}_2\text{COCl}$

NOTE: 1) Source: oxide, 41 mol. sleeves used. 2) other product also detected. 3) 1D HNMR reduction

57: 1. $\text{C}_6\text{H}_5\text{COCl}$, 2. NaBH_4 , 3. $\text{CH}_2=\text{CHCH}_2\text{COCl}$

T₁, T₂ = MeOH/CH₂Cl₂

R21(40) OF 78 - 8 STEPS

58: 1. $\text{C}_6\text{H}_5\text{COCl}$, 2. NaBH_4 , 3. $\text{CH}_2=\text{CHCH}_2\text{COCl}$

NOTE: 1) Diastereomeric, other isomer also detected, overall
yields for diastereomers, 39-40 (20%), 31 mol. source: 71 mol.
sleeves used. 2) NaBH_4 , 41 mol. yield=84%, 3) other product also detected. 4)
1D HNMR reduction

R21(41) OF 78 - REACTION DIAGRAM NOT AVAILABLE

R21(42) OF 78 - REACTION DIAGRAM NOT AVAILABLE

1A. ADDITION OF 1B TO CROSSLINK COMPOUND 2000 ACS ON STM (Continued)

R21(70) OF 78 - 8 STEPS

59: 1. $\text{C}_6\text{H}_5\text{COCl}$, 2. NaBH_4 , 3. $\text{CH}_2=\text{CHCH}_2\text{COCl}$

T₁ = $\text{C}_6\text{H}_5\text{COCl}$
T₂ = NaBH_4 , 80 mol. ACN

R21(70) OF 78 - 9 STEPS

60: 1. $\text{C}_6\text{H}_5\text{COCl}$, 2. NaBH_4 , 3. $\text{CH}_2=\text{CHCH}_2\text{COCl}$

NOTE: 1) Diastereomeric, other isomer also detected, overall
yields for diastereomers, 39-40 (18%), 31 mol. source: 71 mol.
sleeves used. 2) NaBH_4 , 41 mol. yield=87%, 3) other product also detected. 4)
1D HNMR reduction

R21(71) OF 78 - 10 STEPS

61: 1. $\text{C}_6\text{H}_5\text{COCl}$, 2. NaBH_4 , 3. $\text{CH}_2=\text{CHCH}_2\text{COCl}$

T₁ = $\text{C}_6\text{H}_5\text{COCl}$
T₂ = NaBH_4 , 80 mol. ACN

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SA ANSWER 1 OF 10 OF 20 CINCHONIC COPIRIGHT 2009 ACD/nn RTN (Continued)

RI(1): OF 7A



7A

NOTE: 1) α -pinene, other monoterpenes detected, overall yield 40% for diastereomeric, 31-10 (15%), 31-11 (15%), 31-12 (15%), 31-13 (15%), 31-14 (15%) for diastereomeric, 31-15 (15%), 31-16 (15%), 31-17 (15%), 31-18 (15%), 31-19 (15%), 31-20 (15%), 31-21 (15%) other products also detected, 31-22 (15%), 31-23 (15%)

RI(1): OF 7B - REACTION DIAGRAM NOT AVAILABLE

RI(1): OF 7C - REACTION DIAGRAM NOT AVAILABLE

RI(1): OF 7D - REACTION DIAGRAM NOT AVAILABLE

RI(1): OF 7E - REACTION DIAGRAM NOT AVAILABLE

RI(1): OF 7F - REACTION DIAGRAM NOT AVAILABLE

RI(1): OF 7G - REACTION DIAGRAM NOT AVAILABLE

RI(1): OF 7H - REACTION DIAGRAM NOT AVAILABLE

RI(1): OF 7I - REACTION DIAGRAM NOT AVAILABLE
RI(1): OF 7J - CRYSTALLOGRAPHIC DATA FOR THIS RECORD
RI(1): OF 7K - CRYSTALLOGRAPHIC DATA FOR THIS RECORD

SA ANSWER 10 OF 20 CINCHONIC COPIRIGHT 2009 ACD/nn RTN

AN

11.11.2009 CHINCHONA

TI - The tricyclics of 23-ketosaponins: Synthesis of

(22,23,24,25-hydroxy-23,24-spiroformations

AZ Institute of Chemistry, University of Szczecin, Szczecin, Poland, 70-451

DOI 10.1002/anie.200904487

ISSN 0930-7516; EISSN 1521-4095

PP 4860-4865

JOURNAL OF ORGANIC CHEMISTRY

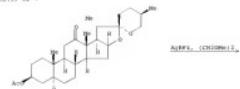
LA English

GL

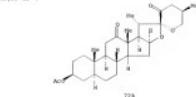


AB (22,23,24,25-hydroxy-23,24-spiroformations) Correspondence to the (22,23,24,25-hydroxy-23,24-spiroformations) using alkaline hydrolysis. An efficient degradation procedure of saponins via the corresponding bisphenol using NaOH in H₂O and Ba(OH)₂ for 3 days rearranged to give spiroformations II in 95% yield

RI(1): OF 7



RI(1): OF 7

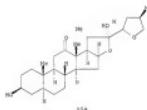


SA ANSWER 10 OF 20 CINCHONIC COPIRIGHT 2009 ACD/nn RTN (Continued)

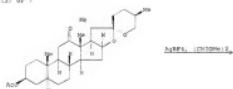
RI(1): OF 7



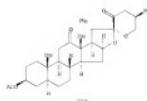
RI(1): OF 7



RI(1): OF 7

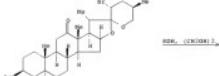


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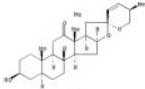


SA ANSWER 10 OF 20 CINCHONIC COPIRIGHT 2009 ACD/nn RTN (Continued)

RI(1): OF 7



RI(1): OF 7



RI(1): OF 7



RI(1): OF 7



SA ANSWER 10 OF 38 CADREACT COPYRIGHT 2008 ACD/NSI DTW (Continued)

RR(7) OF 7



RR(7) OF 7

SA ANSWER 14 OF 38 THESE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RR FORMAT

SA ANSWER 11 OF 38 CADREACT COPYRIGHT 2008 ACD/NSI DTW

AS 134(3):1151. CRASSAFOLIO, G. et al. Isopregnane derivatives of triterpenes. Synthesis, characterization and biological activity of Lospongen, (23S)-hydroxylospongen and (23R)-hydroxylospongen.

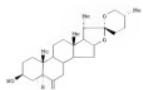
AS Eguiguren-Arregui, Martin A.; Díaz Gómez, Rosario; Martínez, Cecilia S.; Díaz, Cecilia M. Lospongen de Prostheticus lospongen, Facultad de Química, Universidad de La Rioja, 26006 Logroño, Spain. *Chemical Communications*, Oct 2003, pages 341-342. DOI: 10.1039/b307176k. CHEM. JOURNAL, ISSN: 1473-7761

PR CHEMISTRY AND CHEMICAL PHYSICS journal

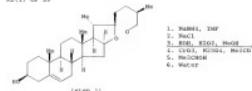
PT CHEMISTRY journal

LA CHEMICAL SCIENCES journal

GE

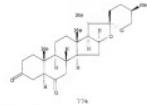
AS The synthesis and characterization of the naturally occurring steroid isopregnane I and its derivative, 23-hydroxilospongen and 23-hydroxylospongen, and their biological activities, including their plant-growth-stimulating activity in *in vitro* tests and in field trials.

SA(1) OF 53



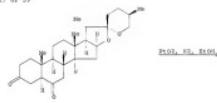
SA ANSWER 11 OF 38 CADREACT COPYRIGHT 2008 ACD/NSI DTW (Continued)

RR(2) OF 59

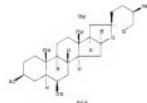


RR(2) stereoselective

RR(2) OF 59



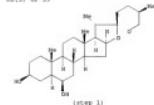
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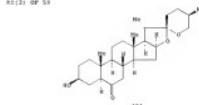
RR(2) stereoselective

SA ANSWER 11 OF 38 CADREACT COPYRIGHT 2008 ACD/NSI DTW (Continued)

RR(3) OF 59

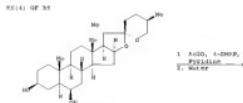


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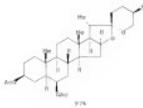
RR(3) stereoselective

RR(4) OF 59



SAE ANSWER 11 OF 28 CASRACT COPYRIGHT 2008 ACS on STW (Continued)

RI(4) of 58

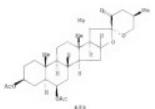


NOTE: stereoselective

RI(5) of 58



RI(5) of 59



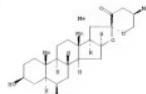
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SAE ANSWER 11 OF 28 CASRACT COPYRIGHT 2008 ACS on STW (Continued)

RI(4) of 59



RI(4) of 59



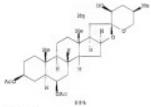
NOTE: stereoselective

RI(7) of 59



SAE ANSWER 11 OF 28 CASRACT COPYRIGHT 2008 ACS on STW (Continued)

RI(7) of 59

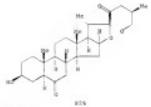


NOTE: stereoselective

RI(8) of 59



RI(8) of 59



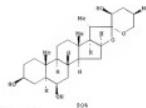
NOTE: stereoselective

SAE ANSWER 11 OF 28 CASRACT COPYRIGHT 2008 ACS on STW (Continued)

RI(9) of 59

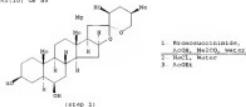


RI(9) of 59



NOTE: stereoselective

RI(10) of 59



SA ANSWER 11 OF 20 CADREACT COPYRIGHT 2008 ACD/ON STW (Continued)

R2(10) OF 59



NOTE: stereoselective

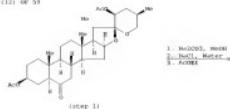
R2(11) OF 59



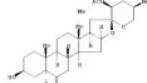
1. AcOH, 4-DMAP,
Pyridine
2. H₂OAc
3. Ac₂O

SA ANSWER 11 OF 20 CADREACT COPYRIGHT 2008 ACD/ON STW (Continued)

R2(12) OF 59



R2(12) OF 59



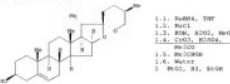
NOTE: stereoselective

R2(13) OF 59



NOTE: stereoselective

R2(13) OF 59 - 2 STERES



SA ANSWER 11 OF 20 CADREACT COPYRIGHT 2008 ACD/ON STW (Continued)

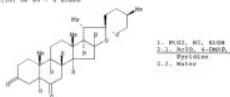
R2(12) OF 59 - 2 STERES



NOTE: 1) stereoselective, 2) stereoselective

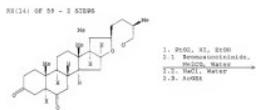
SA ANSWER 11 OF 20 CADREACT COPYRIGHT 2008 ACD/ON STW (Continued)

R2(13) OF 59 - 2 STERES



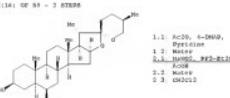
NOTE: 1) stereoselective, 2) stereoselective

R2(14) OF 59 - 2 STERES



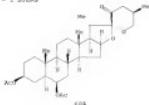
NOTE: 1) stereoselective, 2) stereoselective

R2(14) OF 59 - 2 STERES



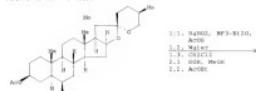
SA ANSWER 11 OF 28 CHASRACT COPYRIGHT 2009 ACD ON STM (Continued)

R21(1) OF 59 - 2 STEPS



NOTE: 1) stereoselective, 2) stereoselective

R21(1) OF 59 - 2 STEPS



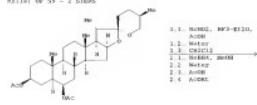
R21(1) OF 59 - 2 STEPS



NOTE: 1) stereoselective, 2) stereoselective

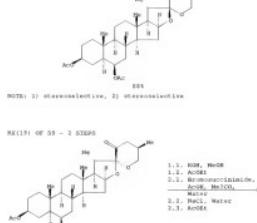
SA ANSWER 11 OF 28 CHASRACT COPYRIGHT 2009 ACD ON STM (Continued)

R21(1) OF 59 - 2 STEPS



NOTE: 1) stereoselective, 2) stereoselective

R21(1) OF 59 - 2 STEPS



NOTE: 1) stereoselective, 2) stereoselective

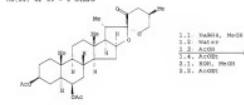
SA ANSWER 11 OF 28 CHASRACT COPYRIGHT 2009 ACD ON STM (Continued)

R21(1) OF 59 - 2 STEPS

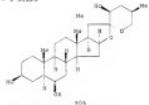


NOTE: 1) stereoselective, 2) stereoselective

R21(2) OF 59 - 2 STEPS



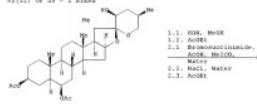
R21(2) OF 59 - 2 STEPS



NOTE: 1) stereoselective, 2) stereoselective

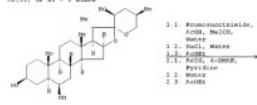
SA ANSWER 11 OF 28 CHASRACT COPYRIGHT 2009 ACD ON STM (Continued)

R21(2) OF 59 - 2 STEPS



NOTE: 1) stereoselective, 2) stereoselective

R21(2) OF 59 - 2 STEPS



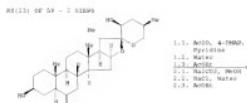
NOTE: 1) stereoselective, 2) stereoselective

1A ANSWER 11 OF 20 CHAPRACT © COPYRIGHT 2008 ACH on STM (Continued)

R2(12): OF 59 - 2 STEMS



NOTE: 1) stereoselective, 2) stereoselective



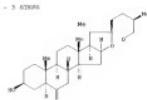
NOTE: 1) stereoselective, 2) stereoselective

1A ANSWER 11 OF 20 CHAPRACT © COPYRIGHT 2008 ACH on STM (Continued)

R2(15): OF 59 - 3 STEMS

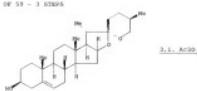


R2(16): OF 59 - 3 STEMS



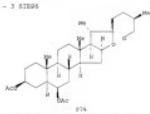
NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective

R2(17): OF 59 - 3 STEMS



1A ANSWER 11 OF 20 CHAPRACT © COPYRIGHT 2008 ACH on STM (Continued)

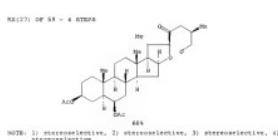
R2(18): OF 59 - 3 STEMS



NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective

1A ANSWER 11 OF 20 CHAPRACT © COPYRIGHT 2008 ACH on STM (Continued)

R2(19): OF 59 - 4 STEMS

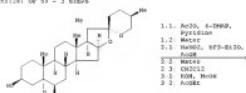


R2(21): OF 59 - 3 STEMS



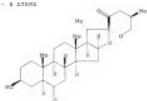
NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective

R2(22): OF 59 - 3 STEMS



1A ANSWER 11 OF 20 CHASRACT COPYRIGHT 2008 ACH on STW (Continued)

NS(21) OF 53 - 4 STEPS

NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4)
stereoselective

NS(25) OF 53 - 4 STEPS



NS(34) OF 53 - 4 STEPS

NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4)
stereoselective

1A ANSWER 11 OF 20 CHASRACT COPYRIGHT 2008 ACH on STW (Continued)

NS(36) OF 53 - 3 STEPS



NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective

NS(37) OF 53 - 4 STEPS



1A ANSWER 11 OF 20 CHASRACT COPYRIGHT 2008 ACH on STW (Continued)

NS(27) OF 53 - 4 STEPS

NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4)
stereoselective

NS(28) OF 53 - 3 STEPS

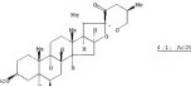


NS(38) OF 53 - 3 STEPS

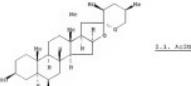


NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective

NS(39) OF 53 - 4 STEPS

NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4)
stereoselective

NS(40) OF 53 - 3 STEPS



14 ANSWER 11 OF 28 CHMRACT © COPYRIGHT 2009 ACD/nn STW (Continued)

RE(42) OF 53 - 3 STERS



NOTE: 1) stereoselective. 2) stereoselective. 3) stereoselective.

RE(41) OF 53 - 4 STERS



RE(41) OF 53 - 5 STERS



NOTE: 1) stereoselective. 2) stereoselective. 3) stereoselective. 4) stereoselective.

14 ANSWER 11 OF 28 CHMRACT © COPYRIGHT 2009 ACD/nn STW (Continued)

RE(42) OF 53 - 5 STERS



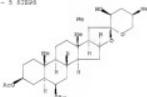
RE(43) OF 53 - 5 STERS



NOTE: 1) stereoselective. 2) stereoselective. 3) stereoselective. 4) stereoselective. 5) stereoselective.

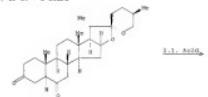
14 ANSWER 11 OF 28 CHMRACT © COPYRIGHT 2009 ACD/nn STW (Continued)

RE(43) OF 53 - 6 STERS

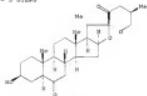


NOTE: 1) stereoselective. 2) stereoselective. 3) stereoselective. 4) stereoselective. 5) stereoselective. 6) stereoselective.

RE(44) OF 53 - 5 STERS



RE(44) OF 53 - 6 STERS



NOTE: 1) stereoselective. 2) stereoselective. 3) stereoselective. 4) stereoselective. 5) stereoselective. 6) stereoselective.

14 ANSWER 11 OF 28 CHMRACT © COPYRIGHT 2009 ACD/nn STW (Continued)

RE(44) OF 53 - 5 STERS



RE(44) OF 53 - 6 STERS



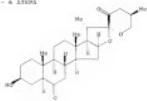
NOTE: 1) stereoselective. 2) stereoselective. 3) stereoselective. 4) stereoselective. 5) stereoselective. 6) stereoselective.

RE(44) OF 53 - 4 STERS



1A ANSWER 11 OF 20 CHMRACTX COPYRIGHT 2009 ACD LAB SWN (Continued)

RI(44) OF 53 - 6 STEREO



NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4) stereoselective, 5) stereoselective

RI(47) OF 53 - 6 STEREO

3,3'-Ac₂O

RI(47) OF 53 - 6 STEREO



NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4) stereoselective, 5) stereoselective, 6) stereoselective

1A ANSWER 11 OF 20 CHMRACTX COPYRIGHT 2009 ACD LAB SWN (Continued)

RI(49) OF 53 - 6 STEREO



NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4) stereoselective, 5) stereoselective, 6) stereoselective

RI(50) OF 53 - 7 STEREO

3,3'-Ac₂O

RI(50) OF 53 - 7 STEREO



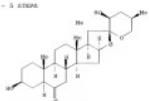
NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4) stereoselective, 5) stereoselective, 6) stereoselective, 7) stereoselective

1A ANSWER 11 OF 20 CHMRACTX COPYRIGHT 2009 ACD LAB SWN (Continued)

RI(44) OF 53 - 5 STEREO

3,3'-Ac₂O

RI(45) OF 53 - 5 STEREO



NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4) stereoselective, 5) stereoselective

RI(45) OF 53 - 6 STEREO

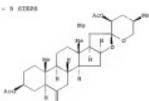
3,3'-Ac₂O

1A ANSWER 11 OF 20 CHMRACTX COPYRIGHT 2009 ACD LAB SWN (Continued)

RI(51) OF 53 - 5 STEREO

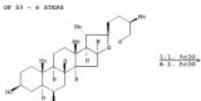
3,3'-Ac₂O

RI(51) OF 53 - 6 STEREO



NOTE: 1) stereoselective, 2) stereoselective, 3) stereoselective, 4) stereoselective, 5) stereoselective

RI(52) OF 53 - 4 STEREO

3,3'-Ac₂O4,4'-Ac₂O

14 ANSWER 11 OF 20 CAMPACT COMPACT 2008 ACS on STM (Continued)

RI(50): OF 59 - 6 ATOMS



NOTE: 1) stereoselective; 2) stereoselective; 3) stereoselective; 4) stereoselective; 5) stereoselective; 6) stereoselective; 7) stereoselective; 8) stereoselective

RI(50): OF 59 - 7 ATOMS



RI(50): OF 59 - 9 ATOMS

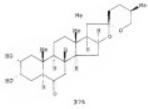


NOTE: 1) stereoselective; 2) stereoselective; 3) stereoselective; 4) stereoselective; 5) stereoselective; 6) stereoselective; 7) stereoselective; 8) stereoselective

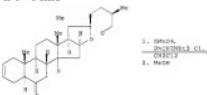
RE-CITE 18 THREE ACS 18 CITATIONS AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE PDF FORMATS

14 ANSWER 12 OF 20 CAMPACT COMPACT 2008 ACS on STM (Continued)

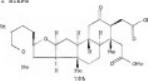
RI(1): OF 3



RI(2): OF 3 - 2 STEPS



RI(2): OF 3 - 2 STEPS

NOTE: 2) *acid-catalyst*RE-CITE 22 THREE ACS 18 CITATIONS AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE PDF FORMATS

14 ANSWER 12 OF 20 CAMPACT COMPACT 2008 ACS on STM

RI(1): OF 3 - 2 STEPS

1) Enzymatic hydrolysis of the steroid compound from desosinase in catalysis conditions by phase transition.

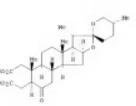
AU Robert Alvarez, Moreno, Juan Enrique, Incostante, Pedro, Mercader-Gómez, Martínez, Carlos Pérez, Melián, Mercedes, Escrivá, Revista Espanola Química (1988), 33(2), 119-122

Revista Espanola de Química (1988), 33(2), 119-122

ES Revista Nacional de Investigaciones Científicas

PT Spanish

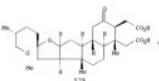
LA Spanish

AB The synthesis of (20R)-spirostan-3-en-6-one, obtained from desosinase, with the use of a phase transition in catalysis conditions. The effect of the acidic conditions affect (20R)-6a,6b-dihydroxyprotop-4-one, and the synthesis of (20R)-spirostan-3-en-6-one is described. The preliminary bioactivity for 10 and its Me ester (2) (*K* = *Mg*) is also reported.

RI(1): OF 3



RI(1): OF 3



14 ANSWER 13 OF 20 CAMPACT COMPACT 2008 ACS on STM

RI(1): OF 3 - 2 STEPS

1) Enzymatic hydrolysis of the steroid compound desosinase and desogenase Part 2.

AU Ibratova, N. M.; Dzhilashev, B. Zh.; Kharlamova, T. V.

CA Izdat. Akad. Nauk SSSR, Nauk. Red. Khim., Kataliz, Khim. Promst., Nauka i Tekhnika, 1985, No. 10, 125-126.

BO National'na Akademii Nauk Respublik Kazakhstan, Seriya Khimicheskaya (Chemical Series), 1985, No. 10, 125-126.

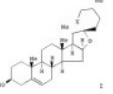
ODEN: INSPEC

DB INSPEC

PT Journal

LA Russian

GI

AB Through a succession of synthetic conversions starting from desosinase (1, *X* = *H*) and desogenase (1, *X* = *O*) the synthesis of heptacosanoids were carried out, exhibiting interest as regulators of plant growth.

RI(2): OF 40



RI(2): OF 40



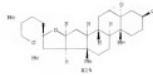
NOTE: stereoselective

1A ANSWER 13 OF 28 CASRACT COPYRIGHT 2008 ACS on STN (Continued)

R2(R) OF 43



(step 3)

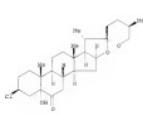


NOTE: stereoselective

R2(R) OF 42



(step 1)



(step 1)

1A ANSWER 13 OF 28 CASRACT COPYRIGHT 2008 ACS on STN (Continued)

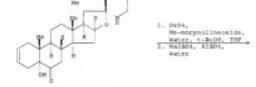
R2(R) OF 40



(step 1)

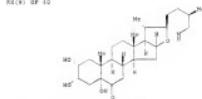
NOTE: regioselective

R2(R) OF 40



(step 1)

R2(R) OF 40

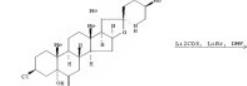


(step 1)

NOTE: stereoselective

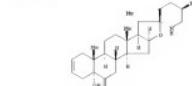
1A ANSWER 13 OF 28 CASRACT COPYRIGHT 2008 ACS on STN (Continued)

R2(R) OF 40



(step 1)

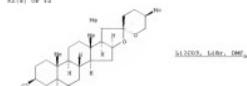
R2(R) OF 40



554

NOTE: regioselective

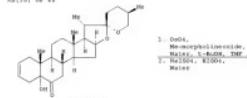
R2(R) OF 40



(step 1)

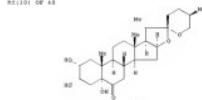
1A ANSWER 13 OF 28 CASRACT COPYRIGHT 2008 ACS on STN (Continued)

R2(10) OF 40



(step 1)

R2(10) OF 40



588

NOTE: stereoselective

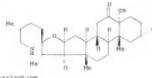
R2(10) OF 40



(step 1)

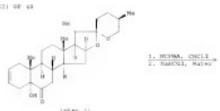
SA ANSWER 12 OF 30 CADFACT COPYRIGHT 2009 ACD/ON STW (Continued)

R2(12) OF 43



NOTE: stereoselective

R2(13) OF 43



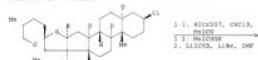
R2(12) OF 43



NOTE: stereoselective

SA ANSWER 13 OF 30 CADFACT COPYRIGHT 2009 ACD/ON STW (Continued)

R2(14) OF 43 - 2 STEPS

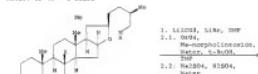


R2(15) OF 43 - 2 STEPS



NOTE: 2) enantioselective

R2(16) OF 43 - 2 STEPS



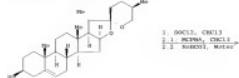
R2(17) OF 43 - 2 STEPS



NOTE: 1) regioselective; 2) stereoselective

SA ANSWER 13 OF 30 CADFACT COPYRIGHT 2009 ACD/ON STW (Continued)

R2(18) OF 43 - 2 STEPS



NOTE: 1) stereoselective; 2) regioselective

R2(19) OF 43 - 2 STEPS



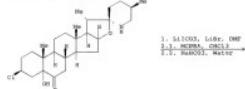
R2(16) OF 43 - 2 STEPS



NOTE: 1) stereoselective

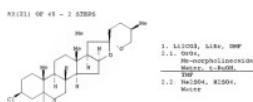
SA ANSWER 13 OF 30 CADFACT COPYRIGHT 2009 ACD/ON STW (Continued)

R2(20) OF 43 - 2 STEPS



NOTE: 1) regioselective; 2) stereoselective

R2(21) OF 43 - 2 STEPS



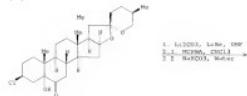
R2(22) OF 43 - 2 STEPS



NOTE: 1) regioselective; 2) stereoselective

1A ANSWER 12 OF 20 CHAMPACT COPYRIGHT 2008 ACH on STW (Continued)

RI(12) OF 43 - 5 STEPS

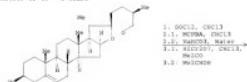


RI(13) OF 43 - 5 STEPS



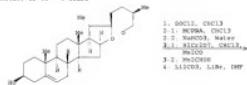
NOTE: 1) regioselective, 2) stereoselective

RI(14) OF 43 - 4 STEPS

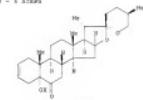


1A ANSWER 13 OF 20 CHAMPACT COPYRIGHT 2008 ACH on STW (Continued)

RI(15) OF 43 - 5 STEPS



RI(16) OF 43 - 4 STEPS



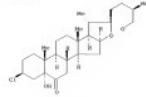
NOTE: 1) stereoselective, 2) stereoselective, 3) regioselective

RI(17) OF 43 - 5 STEPS



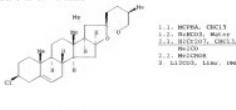
1A ANSWER 13 OF 20 CHAMPACT COPYRIGHT 2008 ACH on STW (Continued)

RI(17) OF 43 - 5 STEPS



NOTE: 1) stereoselective, 2) stereoselective

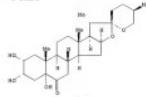
RI(17) OF 43 - 3 STEPS



NOTE: 1) stereoselective, 2) regioselective

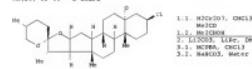
1A ANSWER 13 OF 20 CHAMPACT COPYRIGHT 2008 ACH on STW (Continued)

RI(18) OF 43 - 5 STEPS



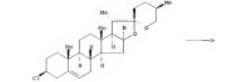
NOTE: 1) regioselective, 2) stereoselective

RI(19) OF 43 - 3 STEPS



NOTE: 1) regioselective, 2) stereoselective

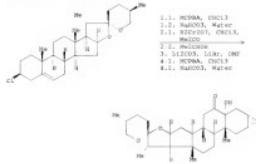
RI(20) OF 43 - 4 STEPS





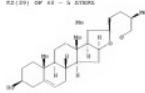
284

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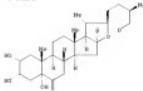
NOTE: 1) stereospecific; 2) regioselective; 3) enantioselective.

36 02000-11-01-20 CONTRACT NUMBER 35000 760 00 000 (P01160)



1. **SOULS**, CHC13
2. **WORMS**, CHC13
2. **He-ROD**, Motor
3. **HEARTS**, CHC13,
MHC
3. **LEADERS**, CHC13
4. **LADIES**, LHR, GMF
5. **DATA**,
MHC,
MHC,
MHC,
MHC,
MHC,
MHC

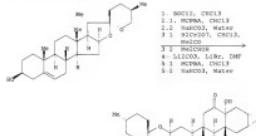
ESTATE PLANNING



NOTE: 1) stereoselective, 2) stereospecific, 4) enantioselective, 5) diastereoselective

14 ANSWER 33 OF 38 SIGNINACT COHORT1 2008 AGS 25 829 (Cont'd) and

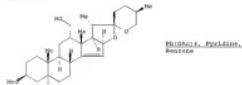
DEC 4 1968 - 5 57695



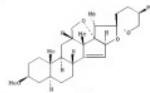
NOTE: 1) stereoselective, 2) stereoselective, 3) regioselective, 4) stereoselective

16 DOCUMENT 14 OF 14 Page 14 of 14 Copyright 2004 AGO of BC

ANSWER

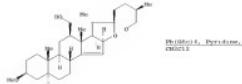


卷之三



NOTE: 280C-0CB4B

第3(2) GFP 11



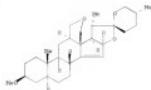
SAF ANSWER 14 OF 28 CHAMFACT. COPYRIGHT 2008 ACD LABS INC.

(Continued)

R2(1) OF 11:



R2(2) OF 11:



R2(2) - product:

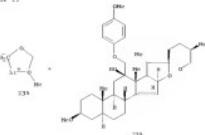
R2(3) OF 11:



SAF ANSWER 14 OF 28 CHAMFACT. COPYRIGHT 2008 ACD LABS INC.

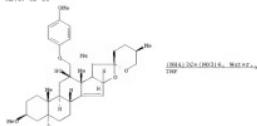
(Continued)

R2(3) OF 11:

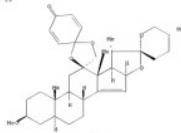


NOTE: stereoselective

R2(4) OF 11:



R2(4) OF 11:



SAF ANSWER 14 OF 28 CHAMFACT. COPYRIGHT 2008 ACD LABS INC.

(Continued)

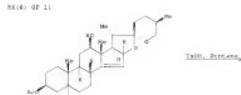
R2(5) OF 11:



R2(6) OF 11:



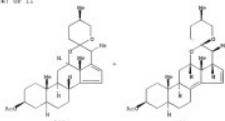
R2(7) OF 11:



SAF ANSWER 14 OF 28 CHAMFACT. COPYRIGHT 2008 ACD LABS INC.

(Continued)

R2(8) OF 11:



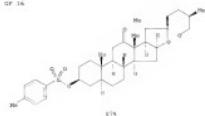
R2(8) OF 11 - 2 ATOMS



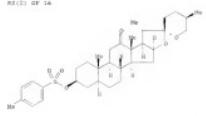
NOTE: i) stereoselective

14 ANSWER 15 OF 20 CASHFRACT CONFIDENTIAL 2004 ACO on STM (Continued)

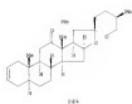
R2(1) OF 14



R2(2) OF 14

LiBr, LiClO₄, DMF

R2(3) OF 14

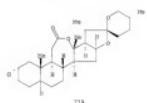


20%

Reflex

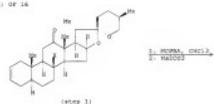
14 ANSWER 15 OF 20 CASHFRACT CONFIDENTIAL 2004 ACO on STM (Continued)

R2(4) OF 14



21%

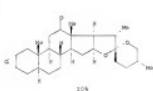
R2(5) OF 14



(step 3)

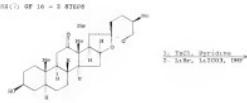
LiClO₄, CHCl₃

R2(6) OF 14



21%

R2(7) OF 14 - 2 STEPS

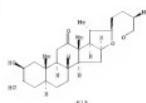
LiClO₄, PyridineLiBr, LiClO₄, DMF

14 ANSWER 15 OF 20 CASHFRACT CONFIDENTIAL 2004 ACO on STM (Continued)

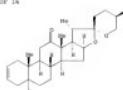
R2(8) OF 14

HNO₂, H₂O₂, Glacial
Acetic

R2(9) OF 14

H₂O₂, CHCl₃

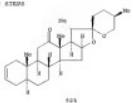
R2(10) OF 14

NaBr, CHCl₃

Reflex

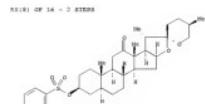
14 ANSWER 15 OF 20 CASHFRACT CONFIDENTIAL 2004 ACO on STM (Continued)

R2(11) OF 14 - 2 STEPS

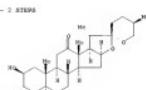


21%

R2(12) OF 14 - 2 STEPS

LiBr, LiClO₄, DMFLiBr, LiClO₄, DMF

R2(13) OF 14 - 2 STEPS



R2(14) OF 14 - 2 STEPS



1A ANSWER 15 OF 20 CASRACT © COPYRIGHT 2008 ACD on STN (Continued)

RE(8) OF 1A - 2 STEPS

1. LiBr, LiAlD₄, DMF
2. H₂O, CHCl₃

RE(9) OF 1A - 2 STEPS



109

NOTE: LiAlD₄

RE(10) OF 1A - 2 STEPS

1. LiBr, LiAlD₄, DMF
2. H₂O, CHCl₃

1A ANSWER 15 OF 20 CASRACT © COPYRIGHT 2008 ACD on STN (Continued)

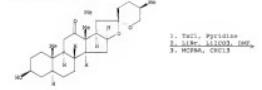
RE(11) OF 1A - 2 STEPS



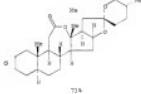
111

NOTE: LiAlD₄

RE(12) OF 1A - 2 STEPS

1. TcCl, Pyridine
2. LiAlD₄, DMF
3. H₂O, CHCl₃

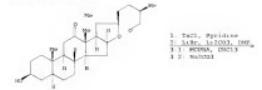
RE(13) OF 1A - 2 STEPS



113

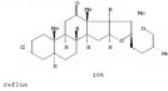
NOTE: LiAlD₄

RE(14) OF 1A - 2 STEPS

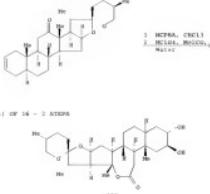
1. TcCl, Pyridine
2. LiAlD₄, DMF
3. H₂O, CHCl₃

1A ANSWER 15 OF 20 CASRACT © COPYRIGHT 2008 ACD on STN (Continued)

RE(15) OF 1A - 2 STEPS

NOTE: LiAlD₄

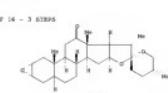
RE(16) OF 1A - 2 STEPS



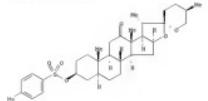
RE(17) OF 1A - 2 STEPS



RE(18) OF 1A - 2 STEPS

NOTE: LiAlD₄

RE(19) OF 1A - 2 STEPS

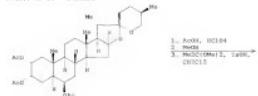


RE(20) OF 1A - 2 STEPS

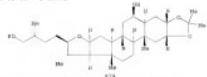
NOTE: LiAlD₄

1A. ANSWER 1B OF 2B CRAFTSACT COPYRIGHT 2009 AGO ON STM (Continued)

RE(10) OF 1B - 3 STROBES

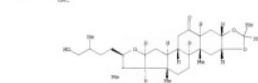
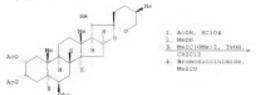


RE(10) OF 1B - 3 STROBES



NOTE: 1) 4 N, OXIDE, 2) 30 MIN, HYDROGENATE, 3) 1 H.

RE(12) OF 1B - 4 STROBES



NOTE: 1) 4 N, OXIDE, 2) 30 MIN, HYDROGENATE, 3) 1 H, 4) 45 MIN

1A. ANSWER 1B OF 2B CRAFTSACT COPYRIGHT 2009 AGO ON STM

2B. ANSWER 1B OF 2B CRAFTSACT COPYRIGHT 2009 AGO ON STM

A2. Arriaga, Martín A.; Echeverría, Gil; Rosado Pérez, Lourdes; Vázquez, Luisa M.; Gómez, Ana; Gómez, María; Gómez, Patricia; Arribalzaga, Rocio; López Pinto, Ana

C8. Arribalzaga, Rocio; López Pinto, Ana. Facultad de Química, Universidad de La Sabana, Sección y C. C. Research, D3 891, Cota

H0. Arribalzaga, Rocio; López Pinto, Ana. Facultad de Química, Universidad de La Sabana, D3 891, Cota, Colombia, 1998, 13(1), 1281-1286

DOI: 10.1002/anie.199807011

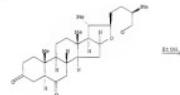
PR. Journal

DT. Journal

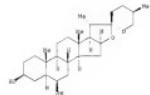
LA. Journal

AB. The synthesis of a plant growth promoter farnesol which bears the characteristic functionality of triterpenes on rings A and B is described.

RE(11) OF 7



RE(12) OF 7



NOTE: 1) N, OXIDE, 2)

RE(13) OF 7

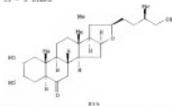


1A. ANSWER 1B OF 2B CRAFTSACT COPYRIGHT 2009 AGO ON STM (Continued)

RE(14) OF 1B - 5 STROBES



RE(15) OF 1B - 5 STROBES

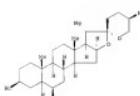


NOTE: 1) 4 N, OXIDE, 2) 30 MIN, HYDROGENATE, 3) 1 H, 4) 45 MIN, 5) 30 MIN, WATER

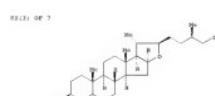
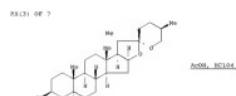
RE-CHEM ? THERE ARE 7 OTHER REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMUL

1A. ANSWER 1B OF 2B CRAFTSACT COPYRIGHT 2009 AGO ON STM (Continued)

RE(12) OF 7



NOTE: 1) HCl, 10 deg., 1 ATM, OXIDIZING



NOTE: 1) 10 deg., 1 ATM, OXIDIZING

14 ANSWER 20 OF 20 CHAPRACT © COPYRIGHT 2008 ACH on STN (Continued)

R2(101) OF 55 - 3 STEPS

2. NaBH4, MeOH, Water
3. TBTU, Pyridine

R2(101) OF 55 - 3 STEPS



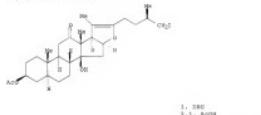
55

R2(104) OF 55 - 4 STEPS

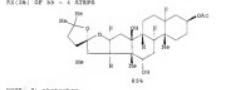
2. NaBH4, MeOH, Water
3. TBTU, Pyridine
4. AcCl

14 ANSWER 20 OF 20 CHAPRACT © COPYRIGHT 2008 ACH on STN (Continued)

R2(14) OF 55 - 4 STEPS

1. NaBH4, MeOH, Water
2. TBTU, Pyridine
3. AcCl
4. AcCl

R2(14) OF 55 - 4 STEPS



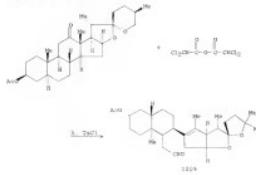
NOTE: 3) photolysis

R2(14) OF 55 - 5 STEPS

2. NaBH4, MeOH, Water
3. TBTU, Pyridine
4. AcCl
5. TBCl₂

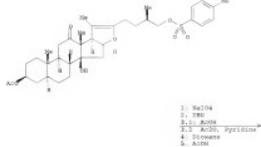
1A ANSWER 20 OF 28 CADRACT © COPYRIGHT 2008 ACG on STW (Continued)

R2(41) OF 54 - 7 STERS



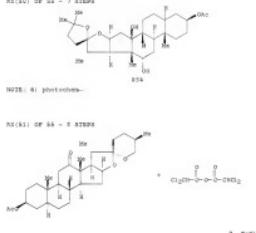
NOTE: 7) photolysis.

R2(41) OF 55 - 5 STERS

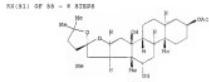


1A ANSWER 20 OF 28 CADRACT © COPYRIGHT 2008 ACG on STW (Continued)

R2(41) OF 55 - 7 STERS



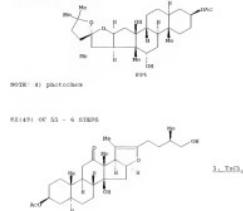
R2(41) OF 55 - 9 STERS



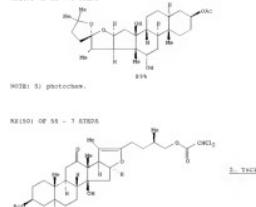
NOTE: 7) photolysis.

1A ANSWER 20 OF 28 CADRACT © COPYRIGHT 2008 ACG on STW (Continued)

R2(41) OF 55 - 5 STERS



R2(41) OF 55 - 6 STERS



1A ANSWER 20 OF 28 CADRACT © COPYRIGHT 2008 ACG on STW (Continued)

R2(53) OF 55 - 9 STERS

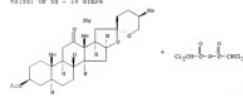


3-L-TsCl

R2(53) OF 55 - 10 STERS

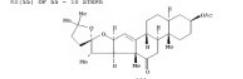


R2(55) OF 55 - 10 STERS



3-L-TsCl

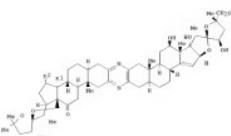
R2(56) OF 55 - 12 STERS



NOTE: 7) photolysis.

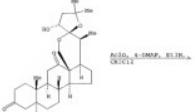
RE-CNT 11 THERE ARE 71 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE-FERRED

ANSWER 22 OF 28 CHARGEABLE COMPRESSOR DEDP PAGE NO. 0008
126-0935 CAPRICE
TC An Efficient Protocol for the Synthesis of Unsymmetrical Pyridones. Total
Synthesis of 2,4-dihydropyridines I
Guo, Changming; Mendez, Soledad; Fuchs, D. L.; Boyd, Michael R.
Journal of the American Chemical Society, West Lafayette, IN 47907, USA
Journal of the American Chemical Society, C1994, 116(12),
1872-1873
DOI: 10.1021/ja0002783
American Chemical Society
Journal of the American Chemical Society
English



AB Reaction of a 1:1 mixture of an α -methoxystyrene and an α -nitrostyrene together with either pyridine/quinidine or Bunck-N is in the presence of 10 mol % diisobutylaluminum chloride in benzene at reflux affords a 70% yield of the corresponding 4,4'-bis(2- α -nitrophenyl)biphenyl in substantially higher yields than quinidine pyridine that the Bunck-N mixtures. The Bunck-N mixtures are also more effective than the Bunck-N method to the synthesis of a C14-15³H-4-pyridyl analog I (93.2% vs. 84% of the enone) which is a chemically potent tricyclic pyridine anticonvulsant agent reported by the U.S. National Institute of Mental Health (NIMH) and the U.S. National Cancer Institute revealed that the differential cytotoxicity pattern of compound I was qualitatively appreciated those of the natural reference Compound I (R322 = bond).

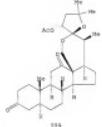
RE(4) OF 39 - REACTION DIAGRAM NOT AVAILABLE
RE(5) OF 39



16 ANSWER 21 OF 38 CHM1045T COPYRIGHT 2008 AOS on STM (Continued)

34 ANSWER 21 OF 38 CASEFACT COPYRIGHT 2008 AOS on STM (Continued)

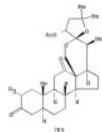
次回(5) GF-29



第二章：数据处理与分析

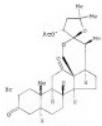


27(6) 97-104



NOTE: stereoselective

2004/05 30



1977年 1月创刊号 1977年1月

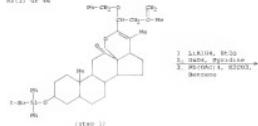
RE:101-08-39 - READING DIAGRAM SHOT AVAILABLE

85(13) OF 31 - 3 87816



14 ANSWER 22 OF 28 CHMTRACT COPYRIGHT 2008 ACD/nc STM (Continued)

RI(1) OF 66



RI(2) OF 66

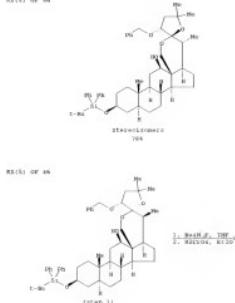


RI(3) OF 66



14 ANSWER 22 OF 28 CHMTRACT COPYRIGHT 2008 ACD/nc STM (Continued)

RI(4) OF 66

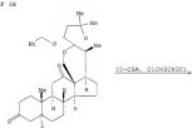


RI(5) OF 66

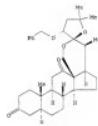


14 ANSWER 22 OF 28 CHMTRACT COPYRIGHT 2008 ACD/nc STM (Continued)

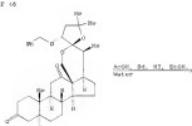
RI(6) OF 66



RI(8) OF 66



RI(7) OF 66



14 ANSWER 22 OF 28 CHMTRACT COPYRIGHT 2008 ACD/nc STM (Continued)

RI(10) OF 66 - 2. 11OMA

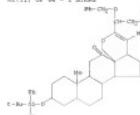


RI(10) OF 66 - 2. 11OMA



1A ANSWER 22 OF 28 CHAMFACT COPYRIGHT 2009 ACD/NSR (Continued)

RI(11) OF 44 = 2 STEPS



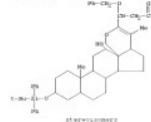
1.1. LiAlD₄, SiD₃
1.2. Ph₃P(OEt)₂, SiD₃
1.3. NaBH₄, SiD₃
2.1. DMSO, CDCl₃

RI(12) OF 44 = 2 STEPS

stereoisomers
aa

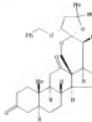
1A ANSWER 22 OF 28 CHAMFACT COPYRIGHT 2009 ACD/NSR (Continued)

RI(13) OF 44 = 2 STEPS

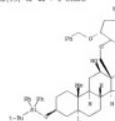


1.1. NaBH₄, SiD₃
1.2. Ph₃P(OEt)₂, SiD₃
2.1. KSCN, NaBH₄, SiD₃

RI(13) OF 44 = 2 STEPS



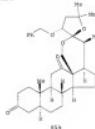
RI(13) OF 44 = 2 STEPS



1.1. NaBH₄, F, THF
1.2. NaBH₄, SiD₃
2.1. NaSCN, NaBH₄, SiD₃

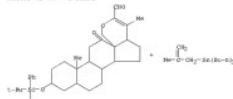
1A ANSWER 22 OF 28 CHAMFACT COPYRIGHT 2009 ACD/NSR (Continued)

RI(13) OF 44 = 2 STEPS



1A ANSWER 22 OF 28 CHAMFACT COPYRIGHT 2009 ACD/NSR (Continued)

RI(14) OF 44 = 2 STEPS



1. NaFD-SiD₃, CHCl₃
2. Ac₂O, Et₃N, CHCl₃
3. NaBH₄, F, THF

RI(14) OF 44 = 2 STEPS

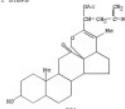


1. 17-CBA, ClCH₂COCl
2. Ac₂O, Et₃N, CHCl₃
3. NaBH₄, F, THF

RI(14) OF 44 = 2 STEPS



RI(15) OF 44 = 2 STEPS

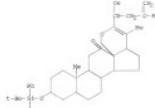


SA ANSWER 21 OF 38 CHAFACT: COMPACT 2009 ACD/NSR (Continued)

RS(11) OF 44 - 3 STEPS



RS(11) OF 44 - 3 STEPS

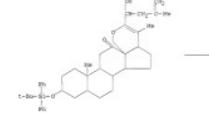


RS(11) OF 44 - 3 STEPS



SA ANSWER 21 OF 38 CHAFACT: COMPACT 2009 ACD/NSR (Continued)

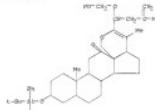
RS(12) OF 44 - 4 STEPS



RS(12) OF 44 - 4 STEPS

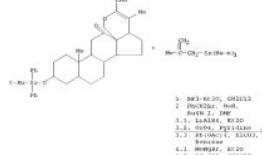


RS(12) OF 44 - 3 STEPS

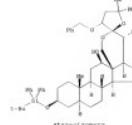


SA ANSWER 21 OF 38 CHAFACT: COMPACT 2009 ACD/NSR (Continued)

RS(12) OF 44 - 4 STEPS



RS(12) OF 44 - 4 STEPS

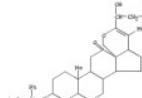


SA ANSWER 21 OF 38 CHAFACT: COMPACT 2009 ACD/NSR (Continued)

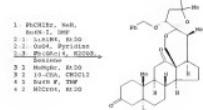
RS(13) OF 44 - 3 STEPS



RS(13) OF 44 - 4 STEPS

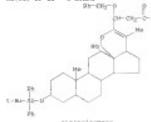


RS(13) OF 44 - 3 STEPS



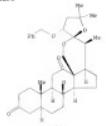
SA ANSWER 11 OF 28 CHAMFACT. COPYRIGHT 2004 ACD/NSN (Continued)

R2(11) OF 44 - 2 STEPS



- 1.1. *NaBH*, Et_2O
- 1.2. 10-*CSA*, CHCl_3
- 2.1. *NaBH*, Et_2O
- 2.2. 10-*CSA*, $\text{CHCl}_3/\text{CH}_2\text{Cl}_2$
3. 10-*CSA*, $\text{CHCl}_3/\text{CH}_2\text{Cl}_2$

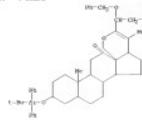
R2(11) OF 44 - 3 STEPS



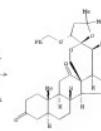
- 1.1. *NaBH*, Et_2O
- 1.2. 10-*CSA*, CHCl_3
- 2.1. *NaBH*, Et_2O
- 2.2. 10-*CSA*, $\text{CHCl}_3/\text{CH}_2\text{Cl}_2$
3. 10-*CSA*, $\text{CHCl}_3/\text{CH}_2\text{Cl}_2$

SA ANSWER 11 OF 28 CHAMFACT. COPYRIGHT 2004 ACD/NSN (Continued)

R2(11) OF 44 - 4 STEPS



R2(11) OF 44 - 5 STEPS



- 1.1. *LiAlH*, Et_2O
- 1.2. 10-*CSA*, CHCl_3
- 2.1. *NaBH*, Et_2O
- 2.2. 10-*CSA*, $\text{CHCl}_3/\text{CH}_2\text{Cl}_2$
- 3.1. *NaBH*, Et_2O
- 3.2. 10-*CSA*, $\text{CHCl}_3/\text{CH}_2\text{Cl}_2$
4. 10-*CSA*, $\text{CHCl}_3/\text{CH}_2\text{Cl}_2$

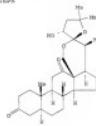
R2(11) OF 44 - 6 STEPS



- 1.1. *NaBH*, Et_2O
- 1.2. 10-*CSA*, CHCl_3
- 1.3. *LiAlH*, Et_2O
- 2.1. *NaBH*, Et_2O
- 2.2. 10-*CSA*, $\text{CHCl}_3/\text{CH}_2\text{Cl}_2$
3. *AcOH*, Pd/H_2 , CH_2Cl_2

SA ANSWER 11 OF 28 CHAMFACT. COPYRIGHT 2004 ACD/NSN (Continued)

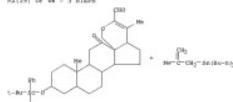
R2(11) OF 44 - 3 STEPS



- 1.1. *NaBH*, Et_2O
- 1.2. 10-*CSA*, CHCl_3
- 1.3. *LiAlH*, Et_2O

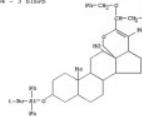
SA ANSWER 11 OF 28 CHAMFACT. COPYRIGHT 2004 ACD/NSN (Continued)

R2(11) OF 44 - 3 STEPS



1. *NF3-BuLi*, CHCl_2
2. *DHF*, CHCl_2
3. *NaBH*, Et_2O
- 3.1. 10-*CSA*, $\text{CHCl}_3/\text{CH}_2\text{Cl}_2$
- 3.2. *Pb(OAc)4*, CHCl_3 , H_2O

R2(11) OF 44 - 3 STEPS



R2(11) OF 44 - 3 STEPS



R2(11) OF 44 - 4 STEPS

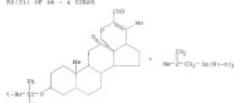


- 1.1. *NaBH*, Et_2O
- 1.2. 10-*CSA*, CHCl_3
- 1.3. *LiAlH*, Et_2O
- 2.1. *NaBH*, Et_2O
- 2.2. 10-*CSA*, $\text{CHCl}_3/\text{CH}_2\text{Cl}_2$
3. 10-*CSA*, $\text{CHCl}_3/\text{CH}_2\text{Cl}_2$

1A ANSWER 21 OF 28 CHMTRACT COPYRIGHT 2008 ACG on STN
R2(30) OF 44 - 3 STEPS (Continued)



R2(31) OF 44 - 4 STEPS



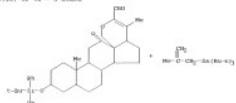
3.1. PHENYLIC₂

R2(31) OF 44 - 5 STEPS

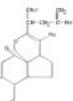
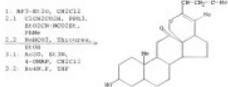


1A ANSWER 21 OF 28 CHMTRACT COPYRIGHT 2008 ACG on STN (Continued)

R2(31) OF 44 - 3 STEPS



R2(31) OF 44 - 3 STEPS



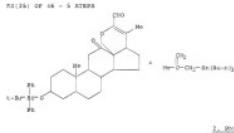
3.1. PHENYLIC₂

1A ANSWER 21 OF 28 CHMTRACT COPYRIGHT 2008 ACG on STN (Continued)

R2(34) OF 44 - 5 STEPS



R2(34) OF 44 - 6 STEPS



3.1. PHENYLIC₂

R2(35) OF 44 - 5 STEPS



1A ANSWER 21 OF 28 CHMTRACT COPYRIGHT 2008 ACG on STN (Continued)

R2(36) OF 44 - 6 STEPS



3.1. PHENYLIC₂

R2(36) OF 44 - 6 STEPS



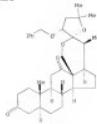
R2(37) OF 44 - 5 STEPS



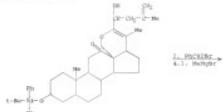
→

1A ANSWER 22 OF 28 CHASRACT COPIRIGHT 2009 ACD ON STN (Continued)

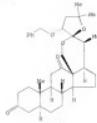
R2(21) OF 44 = 5 53395



R2(31) OF 44 = 6 AZ395

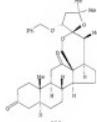


R2(34) OF 44 = 6 53395

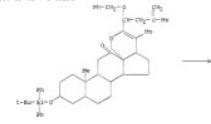


1A ANSWER 22 OF 28 CHASRACT COPIRIGHT 2009 ACD ON STN (Continued)

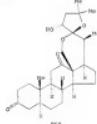
R2(41) OF 44 = 7 AZ395



R2(41) OF 44 = 8 AZ395

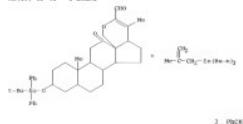


R2(41) OF 44 = 9 AZ395



1A ANSWER 22 OF 28 CHASRACT COPIRIGHT 2009 ACD ON STN (Continued)

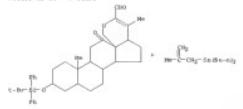
R2(41) OF 44 = 6 S395

 $\xrightarrow[5,1-\text{methylglc}^+]{\text{Li-NaClO}_4}$

R2(39) OF 44 = 6 53395

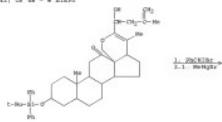


R2(40) OF 44 = 7 53395

 $\xrightarrow[5,1-\text{methylglc}^+]{\text{Li-NaClO}_4}$

1A ANSWER 22 OF 28 CHASRACT COPIRIGHT 2009 ACD ON STN (Continued)

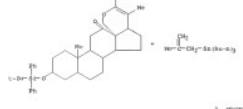
R2(43) OF 44 = 6 S395



R2(43) OF 44 = 7 53395



R2(43) OF 44 = 7 S395

 $\xrightarrow[5,1-\text{methylglc}^+]{\text{Li-NaClO}_4}$

SA ANSWER 24 OF 28 CARMFACT COPYRIGHT 2009 ACG on STM (Continued)

RE(1) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(2) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(3) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(4) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(5) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(6) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(7) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(8) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(9) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(10) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(11) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(12) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(13) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(14) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(15) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(16) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(17) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(18) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(19) OF 24 - REACTION DIAGRAM NOT AVAILABLE
 RE(20) OF 24 - REACTION DIAGRAM NOT AVAILABLE

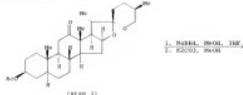
SA ANSWER 25 OF 28 CARMFACT COPYRIGHT 2009 ACG on STM
 121-01177-0 CARMFACT
 11. Evaluation of Antitumor Activity Of Bicyclic Marine Natural Product Cycloleptane I
 Related to the Cyclohexa Marine Natural Product Cycloleptane I
 AZ Department of Chemistry, University of California, Berkeley, CA 94720,
 CA 94720
 30 Journal of Organic Chemistry (1994), 59(22), 4620-39
 DE JOURNAL
 ENGLISH
 FR English

GI

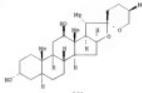
* REACTION DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE POINT *

AB A mild, high-yield synthesis of two steroid pyranosides was achieved from the oligosylation of 2-acetyl-3-hydroxyl steroids, which were produced in high yield by a one-pot, three-step synthesis of 2-acetyl-3-hydroxy- α -methyl- β -D-glucopyranosides. 2-Acetylglucoside-3-one gave diverse steroid glycosides, while 2-acetyl-3-hydroxy- α -methyl- β -D-glucopyranose and its 2-acetyl-3-acetoxymethyl derivative were also made using this method. Both Cl-type geometric isomers of the steroid-3,14-diol-2-acetyl-3-hydroxy- α -methyl- β -D-glucopyranosides prepared by reaction of 1,3-dihydroxyacetone with cholesterol-1,3-dione, A and B, were found to be potent inhibitors of the enzyme 11 β -hydroxysteroid dehydrogenase, which converts cortisone to cortisol. Compound A was also found to inhibit 11 β -hydroxysteroid dehydrogenase-1, and compound B was found to inhibit 11 β -hydroxysteroid dehydrogenase-2. These compounds may have potential as disease-oriented antitumor screen, but none showed sufficient activity to warrant *in vivo* investigation.

RE(1) OF 25



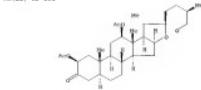
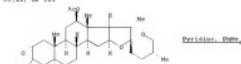
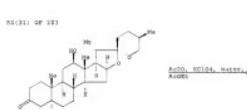
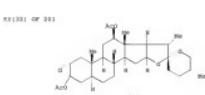
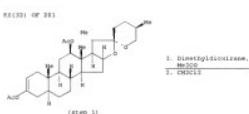
RE(2) OF 25



SA ANSWER 25 OF 28 CARMFACT COPYRIGHT 2009 ACG on STM (Continued)

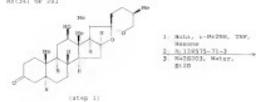


SA ANSWER 25 OF 28 CARMFACT COPYRIGHT 2009 ACG on STM (Continued)



SAE ANSWER 15 OF 38 CDRBACT COMPACT 2008 ACD on S7W (Continued)

RE(24) OF 231



RE(24) OF 231



RE(24) OF 231

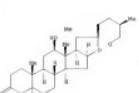


SAE ANSWER 15 OF 38 CDRBACT COMPACT 2008 ACD on S7W (Continued)

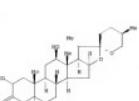
RE(25) OF 231



RE(25) OF 231

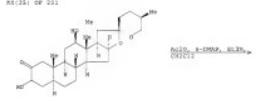


RE(25) OF 231



SAE ANSWER 15 OF 38 CDRBACT COMPACT 2008 ACD on S7W (Continued)

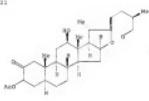
RE(25) OF 231



RE(26) OF 231



RE(26) OF 231



RE(26) OF 231



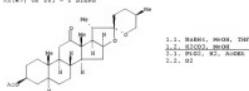
NOTE: 34% OVERALL

SAE ANSWER 15 OF 38 CDRBACT COMPACT 2008 ACD on S7W (Continued)

RE(26) OF 231 - REACTION DIAGRAM NOT AVAILABLE

RE(27) OF 231 - REACTION DIAGRAM NOT AVAILABLE

RE(27) OF 231 - 3 STEPS



RE(28) OF 231 - 2 STEPS

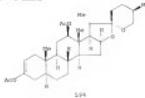


RE(28) OF 231 - 2 STEPS



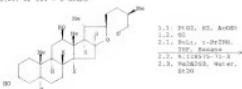
SA ANSWER 15 OF 28 CDRFACT COPYRIGHT 2008 ACD/CS RTW (Continued)

RI(44) OF 231 - 2 STEPS



514

RI(45) OF 231 - 2 STEPS



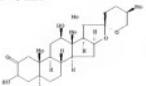
RI(46) OF 231 - 2 STEPS



515

SA ANSWER 16 OF 28 CDRFACT COPYRIGHT 2008 ACD/CS RTW (Continued)

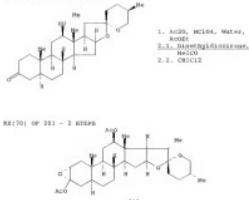
RI(46) OF 231 - 2 STEPS



RI(46) OF 231 - 2 STEPS

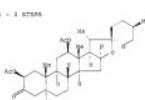


RI(70) OF 231 - 2 STEPS



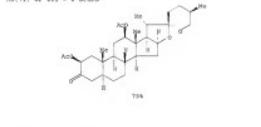
SA ANSWER 25 OF 28 CDRFACT COPYRIGHT 2008 ACD/CS RTW (Continued)

RI(71) OF 231 - 2 STEPS



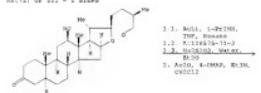
716

RI(72) OF 231 - 2 STEPS



716

RI(73) OF 231 - 2 STEPS



716

SA ANSWER 25 OF 28 CDRFACT COPYRIGHT 2008 ACD/CS RTW (Continued)

RI(73) OF 231 - 2 STEPS



716

RI(73) OF 231 - 2 STEPS



RI(73) OF 231 - 2 STEPS



RI(73) OF 231 - REACTION DIAGRAM NOT AVAILABLE

RI(74) OF 231 - REACTION DIAGRAM NOT AVAILABLE

RI(75) OF 231 - REACTION DIAGRAM NOT AVAILABLE

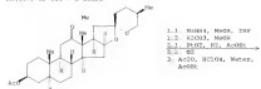
RI(76) OF 231 - REACTION DIAGRAM NOT AVAILABLE

RI(77) OF 231 - REACTION DIAGRAM NOT AVAILABLE

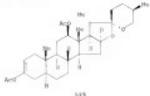
RI(78) OF 231 - REACTION DIAGRAM NOT AVAILABLE

SA ANSWER 25 OF 26 CHIMACT - COPYRIGHT 2009 ACS on STW (Continued)

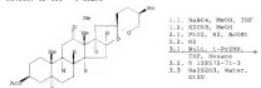
RI(127) OF 261 - 3 STEPS



RI(128) OF 261 - 3 STEPS

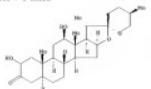


RI(129) OF 261 - 3 STEPS



SA ANSWER 25 OF 26 CHIMACT - COPYRIGHT 2009 ACS on STW (Continued)

RI(129) OF 261 - 3 STEPS



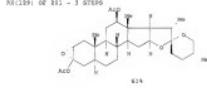
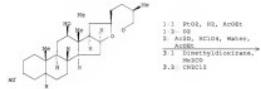
RI(130) OF 261 - 3 STEPS



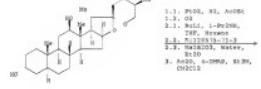
RI(130) - 3. 53% OVERALL

SA ANSWER 25 OF 26 CHIMACT - COPYRIGHT 2009 ACS on STW (Continued)

RI(130) OF 261 - 3 STEPS



RI(130) OF 261 - 3 STEPS



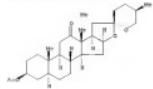
SA ANSWER 25 OF 26 CHIMACT - COPYRIGHT 2009 ACS on STW (Continued)

RI(130) OF 261 - 3 STEPS



RI(130) - 3. 53% OVERALL, 31. 94% OVERALL

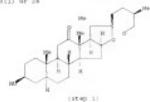
RI(131) OF 261 - 4 STEPS



1.1. NaBH_4 , MeOH , THF
1.2. K_2CO_3 , MeOH
2.1. Pd/C , H_2 , AcOH
3. AcCl , HClO_4 , Water , AcOH
4. 1. Boc_2O , 1-Py2Bn,
 CHCl_3
4. 2. CHCl_3

1A ANSWER 24 OF 28 CINAFACT COPYRIGHT 2008 ACG on S7W
 12. 1213114161. CINAFACT
 13. 1213114162. 17-hydroxyestrone from hexogenin
 14. Rosa Gómez, José Alberca, Beatriz Espinosa, José Manuel Valos Castaño,
 Dep. DE Farm., Fac. Fac. DE Med., Colegio Oficial de Farmacéuticos de Madrid, 28013, 21-23
 CSIC-CSICM, IZIPIAC, IZAM; E8000-VIS
 DT Aplican
 LA Aplican
 AA Aplican

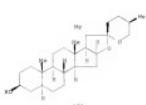
15. Hexogenin was converted by a 3-step procedure starting from hexogenin



1. LiBH4, CH2Cl2, 0°C
 2. H2O, NaBH4

(step 1)

16. 1213114162



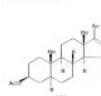
(step 2)

1A ANSWER 24 OF 28 CINAFACT COPYRIGHT 2008 ACG on S7W (Continued)

12.(2) OF 28

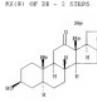


1. Acid, Pyridine,
 MeOH-HCl
 2. LiBH4, CH2Cl2
 3. AcOH, MeOH

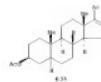


(step 3)

12.(3) OF 28 - 2 STEPS

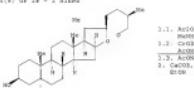


1.1. NH3, (CH2OH)2
 1.2. H2O, Wallenius
 1.3. AcOH, Pyridine,
 MeOH-HCl
 2. LiBH4, CH2Cl2
 3. AcOH, MeOH



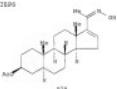
1A ANSWER 24 OF 28 CINAFACT COPYRIGHT 2008 ACG on S7W (Continued)

13.(2) OF 28 - 2 STEPS

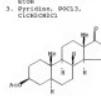


1.1. AcOH, Pyridine,
 MeOH-HCl
 2. LiBH4, CH2Cl2
 3. AcOH, MeOH

13.(3) OF 28 - 2 STEPS



1.1. AcOH, Pyridine,
 MeOH-HCl
 2. LiBH4, CH2Cl2
 3. AcOH, MeOH

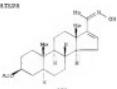


13.(4) OF 28 - 3 STEPS



1.1. NH3, CH2Cl2
 1.2. H2O, Wallenius
 1.3. AcOH, Pyridine,
 MeOH-HCl
 2. LiBH4, CH2Cl2
 3. AcOH, MeOH

13.(5) OF 28 - 3 STEPS



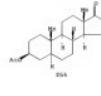
1.1. NH3, CH2Cl2
 1.2. H2O, Wallenius
 1.3. AcOH, Pyridine,
 MeOH-HCl
 2. LiBH4, CH2Cl2
 3. AcOH, MeOH

1A ANSWER 24 OF 28 CINAFACT COPYRIGHT 2008 ACG on S7W (Continued)

13.(6) OF 28 - 3 STEPS



1.1. AcOH, Pyridine,
 MeOH-HCl
 2. LiBH4, CH2Cl2
 3. Pyridine, DCCl3,
 CH2Cl2



13.(7) OF 28 - 4 STEPS



1.1. AcOH, Pyridine,
 MeOH-HCl
 2. LiBH4, CH2Cl2
 3. Pyridine, DCCl3,
 CH2Cl2

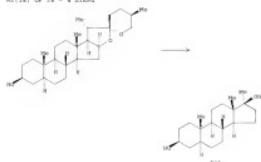


1.1. AcOH, Pyridine,
 MeOH-HCl
 2. LiBH4, CH2Cl2
 3. Pyridine, DCCl3,
 CH2Cl2

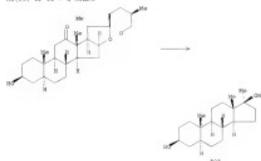


SA NUMBER 24 OF 29 CAMPACT COMPACT 2008 ACD ON RTN (Continued)

R2(14) OF 24 - 4 STROB



R2(15) OF 24 - 4 STROB



SA NUMBER 24 OF 29 CAMPACT COMPACT 2008 ACD ON RTN (Continued)

R2(17) OF 24 - 6 STROB



R2(17) OF 24 - 6 STROB



R2(18) OF 24 - 7 STROB

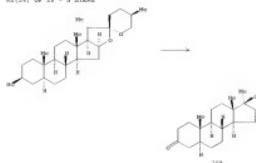


R2(19) OF 24 - 7 STROB

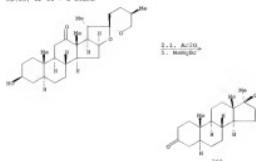


SA NUMBER 24 OF 29 CAMPACT COMPACT 2008 ACD ON RTN (Continued)

R2(24) OF 24 - 5 STROB



R2(25) OF 24 - 5 STROB



SA NUMBER 27 OF 29 CAMPACT COMPACT 2008 ACD ON RTN

T1: Acetoxylase: Enzyme that converts the carbonyl group in hecogenin

A2: Ruiz Garcia, Jose Alberto

C1: Facultad de Ciencias Químicas, Universidad de Valparaíso, Valparaíso, Chile

R2: Revista Chilena de Farmacia (1992), 22(1), 100-4

D1: DOI: 10.4067/S0717-01641992000100010

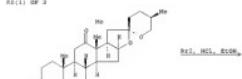
J1: Journal

L1: Spanish

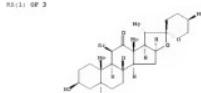
G1:

R2: Biotransformation of hecogenin (10-hydroxycoprostan-13-one) afforded 11 β -hecogeninol, which was hydrolyzed with 10% aq. NaOH solution to give 35,13 β -dihydroxycoprostan-11-one (I).

R2(1) OF 2



R2(1) OF 3



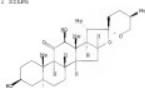
R2(2) OR 3



R2(3) OR 3 - 2 STING



R2(3) OR 3 - 1 STING



1A ANSWER 18 OF 26 CINAFACT COPYRIGHT 2006 ACH on RTR

AU 13134496 CINAFACT

CN 100430006 A CINAFACT, 2004-08-26

AU Number: 13134496 CINAFACT, 2004-08-26

AU Author: ANDREWS, LILIANE; WINTERFELD, ELENA

AU Title: 10,13-dimethyl-16-acetoxy-18,14 β ,25-trihydroxy-4-

H-cholestan-3-one

AU Abstract: This invention relates to a method of synthesis of

steroid ketones, particularly 10,13-dimethyl-16-acetoxy-18,14 β ,25-trihydroxy-4-

H-cholestan-3-one.

AU Date: 2004-08-26

AU Type: PCT

AU Language: English

AU Source: EP0430006A1

1A ANSWER 19 OF 26 CINAFACT COPYRIGHT 2006 ACH on RTR

AU 13134497 CINAFACT

CN 100430007 A CINAFACT, 2004-08-26

AU Number: 13134497 CINAFACT, 2004-08-26

AU Author: ANDREWS, LILIANE; WINTERFELD, ELENA

AU Title: 10,13-dimethyl-16-acetoxy-18,14 β ,25-trihydroxy-4-

H-cholestan-3-one

AU Abstract: This invention relates to a method of synthesis of

steroid ketones, particularly 10,13-dimethyl-16-acetoxy-18,14 β ,25-trihydroxy-4-

H-cholestan-3-one.

AU Date: 2004-08-26

AU Type: PCT

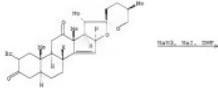
AU Language: English

AU Source: EP0430007A1

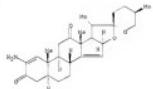
* SIZECOTE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Starting from heptenone derivative I, a short route to cephalactin analog II was developed. The reaction sequence involved the epoxidation of heptenone ketone III to cephalactin acetone IV followed by hydrolysis.

R2(1) OR 10



R2(1) OR 10



R2(2) OR 10 - REACTION DIAGRAM NOT AVAILABLE

R2(4) OR 10 - REACTION DIAGRAM NOT AVAILABLE

R2(5) OR 10 - REACTION DIAGRAM NOT AVAILABLE

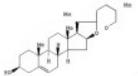
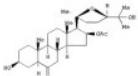
R2(6) OR 10 - REACTION DIAGRAM NOT AVAILABLE

R2(7) OR 10 - REACTION DIAGRAM NOT AVAILABLE

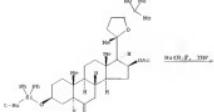
R2(8) OR 10 - REACTION DIAGRAM NOT AVAILABLE

R2(9) OR 10 - REACTION DIAGRAM NOT AVAILABLE

R2(10) OR 10 - REACTION DIAGRAM NOT AVAILABLE

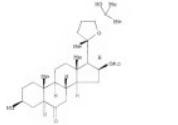
AB The title compound (II), which was isolated as its β -heptenone form, was obtained by the reduction of Chrysanthene varione (Ocimums: Chrysanthinae), has been synthesized from diconine (I) in 8 steps.

R2(1) OR 23



SA ANSWER 19 OF 19 CINNACT COPIRIGHT 2008 ACD/NSW (Continued)

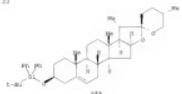
RI(1) OF 33



RI(2) OF 33

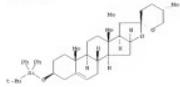


RI(2) OF 33

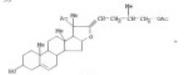


SA ANSWER 19 OF 19 CINNACT COPIRIGHT 2008 ACD/NSW (Continued)

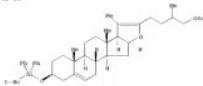
RI(3) OF 33

 $\text{Ac}_2\text{O, NaHCl, DMSO-d}_6$

RI(3) OF 33

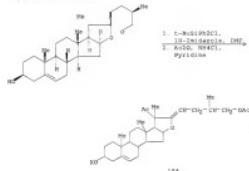


RI(3) OF 33

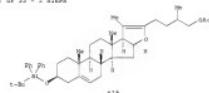


SA ANSWER 20 OF 20 CINNACT COPIRIGHT 2008 ACD/NSW (Continued)

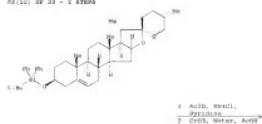
RI(1) OF 33 - 2 STEPS



RI(2) OF 33 - 2 STEPS

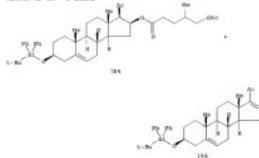


RI(2) OF 33 - 3 STEPS

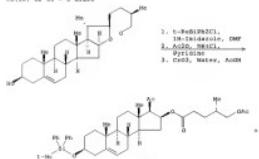


SA ANSWER 20 OF 20 CINNACT COPIRIGHT 2008 ACD/NSW (Continued)

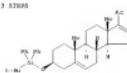
RI(1) OF 33 - 3 STEPS



RI(1A) OF 33 - 3 STEPS

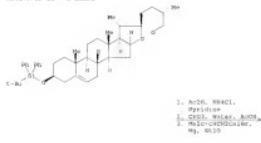


RI(1B) OF 33 - 3 STEPS

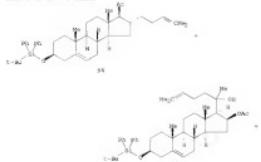


SA ANSWER 29 OF 38 CADREACT COPYRIGHT 2008 ACD/ON NMR (Continued)

RR(17) OF 33 - 3 STEPS



RR(17) OF 33 - 3 STEPS



RR(17) OF 33 - 3 STEPS

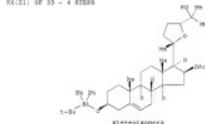


SA ANSWER 29 OF 38 CADREACT COPYRIGHT 2008 ACD/ON NMR (Continued)

RR(31) OF 33 - 4 STEPS



RR(31) OF 33 - 4 STEPS



NOTE: 4. Diisopinane is a trace product.

RR(33) OF 33 - 4 STEPS



SA ANSWER 29 OF 38 CADREACT COPYRIGHT 2008 ACD/ON NMR (Continued)

RR(18) OF 33 - 3 STEPS

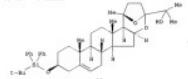


RR(18) OF 33 - 4 STEPS

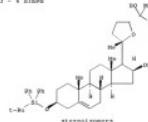


SA ANSWER 29 OF 38 CADREACT COPYRIGHT 2008 ACD/ON NMR (Continued)

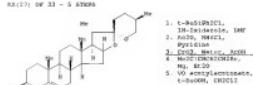
RR(32) OF 33 - 4 STEPS



RR(32) OF 33 - 4 STEPS

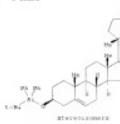


RR(37) OF 33 - 5 STEPS



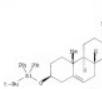
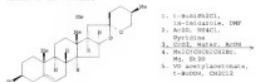
SA ANSWER 29 OF 38 CINAFACT COPYRIGHT 2008 AGO nm STM (Continued)

R2(1) OF 33 - 5 STEPS



NOTE: Si 24S-epimer is a trace product

R2(18) OF 33 - 5 STEPS



NOTE: Si 24S-epimer is a trace product

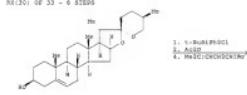
SA ANSWER 29 OF 38 CINAFACT COPYRIGHT 2008 AGO nm STM (Continued)

R2(19) OF 33 - 5 STEPS

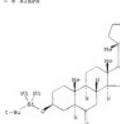


NOTE: a) 24S-epimer is a trace product, b) second step - ultrasound

R2(20) OF 33 - 6 STEPS



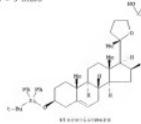
R2(21) OF 33 - 6 STEPS



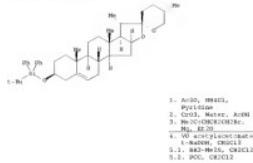
NOTE: 5) 24S-epimer is a trace product, 6) second step - ultrasound

SA ANSWER 29 OF 38 CINAFACT COPYRIGHT 2008 AGO nm STM (Continued)

R2(22) OF 33 - 5 STEPS



R2(23) OF 33 - 5 STEPS

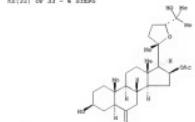


SA ANSWER 29 OF 38 CINAFACT COPYRIGHT 2008 AGO nm STM (Continued)

R2(24) OF 33 - 6 STEPS

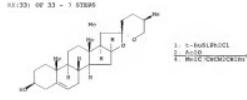


R2(25) OF 33 - 6 STEPS



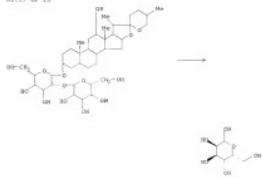
NOTE: a) 24S-epimer is a trace product, b) second step - ultrasound

R2(26) OF 33 - 7 STEPS

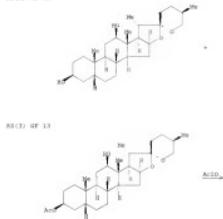


14 ANSWER 31 OF 38 CengageCT ©Cengage 2009 ACD on STW (Continued)

Rx(1) of 13

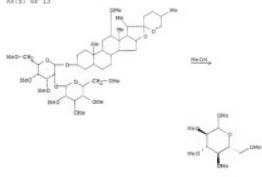


Rx(3) of 13

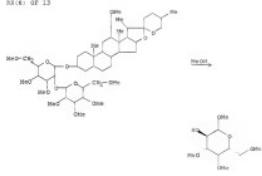


14 ANSWER 31 OF 38 CengageCT ©Cengage 2009 ACD on STW (Continued)

Rx(5) of 13



Rx(7) of 13

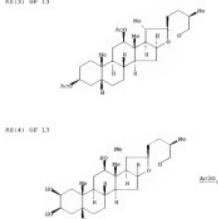


Rx(9) of 13

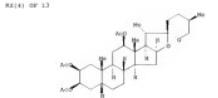


14 ANSWER 31 OF 38 CengageCT ©Cengage 2009 ACD on STW (Continued)

Rx(11) of 13

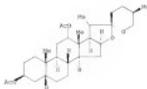


Rx(14) of 13

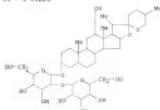


14 ANSWER 31 OF 38 CHAFACT. COPYRIGHT 2008 ACD/ON SOFTWARE (Continued)

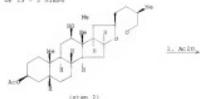
RI(1) OF 13



RI(10) OF 13 - 2 STEPS

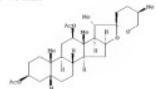


RI(10) OF 13 - 3 STEPS

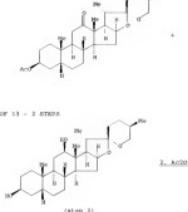


14 ANSWER 31 OF 38 CHAFACT. COPYRIGHT 2008 ACD/ON SOFTWARE (Continued)

RI(10) OF 13 - 2 STEPS

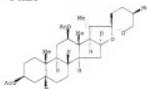


RI(11) OF 13 - 2 STEPS

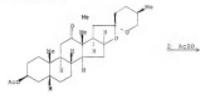


14 ANSWER 31 OF 38 CHAFACT. COPYRIGHT 2008 ACD/ON SOFTWARE (Continued)

RI(11) OF 13 - 2 STEPS



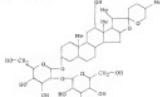
RI(12) OF 13 - 2 STEPS



RI(12) OF 13 - 3 STEPS



RI(12) OF 13 - 2 STEPS



14 ANSWER 31 OF 38 CHAFACT. COPYRIGHT 2008 ACD/ON SOFTWARE (Continued)

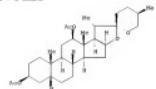
RI(13) OF 13 - 2 STEPS



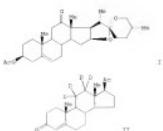
RI(13) OF 13 - 3 STEPS



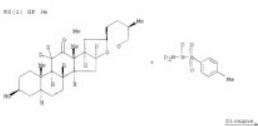
RI(13) OF 13 - 2 STEPS



LA ANSWER 12 OF 26 CHAMPAIGN COPYRIGHT 2008 ACD/ABN
 AB 11219176
 T1 125(1) OF 125 11,13,13,17,20a-pregnane for mass spectral
 investigation of pregnane metabolism
 AG Prof. Dr. J. M. G. H. M. Verhaar, Department of Toxicology, John W.
 Hey Chan, Queen Mary Coll., London, E1 4NS, UK
 AB 125(1) OF 125 11,13,13,17,20a-pregnane, 11,13-dihydro
 DT 125(1) OF 125 11,13,13,17,20a-pregnane, 11,13-dihydro
 LA English
 GL

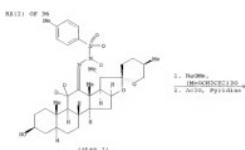


AB Sterane acetate 21 has been transformed into 21(1),21(2),21(3),21(4)-
 D₄-pregnane (22) via base-catalyzed lactone exchange with DODC at
 100°C. Subsequent reduction of the C17-C20 double bond with LiAlD₄ in the case of
 11,13,13,17-tetrahydro-11,13-dihydroxy-17,20-diene, and reduction with LiBH₄ in the
 case of 11,13,13,17-tetrahydro-11,13-dihydroxy-17,20-diene, followed by degradation of the
 spiroketal side chain and dehydrogenation to ring A.

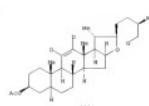


LA ANSWER 13 OF 26 CHAMPAIGN COPYRIGHT 2008 ACD/ABN (Continued)

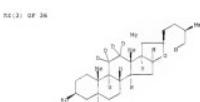
RR(1) OF 26



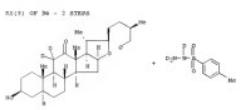
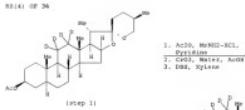
RR(2) OF 26



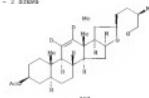
LA ANSWER 21 OF 26 CHAMPAIGN COPYRIGHT 2008 ACD/ABN (Continued)



LA ANSWER 22 OF 26 CHAMPAIGN COPYRIGHT 2008 ACD/ABN (Continued)

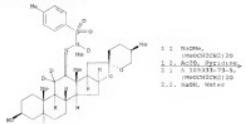


RR(3) OF 26 - 2 STEPS



SAF ANSWER 32 OF 38 CINAFACT. COPYRIGHT 2009 ACD/NS STN (Continued)

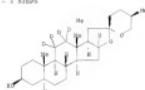
R2(10) OF 34 - 2 STEPS



R2(10) OF 34 - 2 STEPS

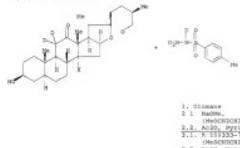


R2(10) OF 34 - 2 STEPS

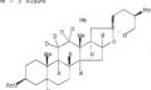


SAF ANSWER 32 OF 38 CINAFACT. COPYRIGHT 2009 ACD/NS STN (Continued)

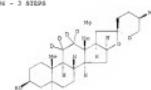
R2(14) OF 34 - 2 STEPS



R2(14) OF 34 - 2 STEPS



R2(14) OF 34 - 2 STEPS

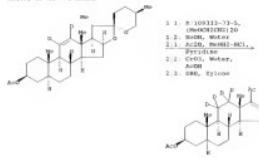


R2(14) OF 34 - 2 STEPS

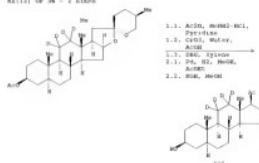


SAF ANSWER 32 OF 38 CINAFACT. COPYRIGHT 2009 ACD/NS STN (Continued)

R2(11) OF 34 - 2 STEPS

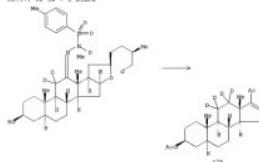


R2(11) OF 34 - 2 STEPS

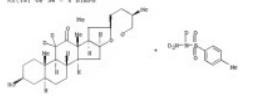


SAF ANSWER 32 OF 38 CINAFACT. COPYRIGHT 2009 ACD/NS STN (Continued)

R2(17) OF 34 - 3 STEPS



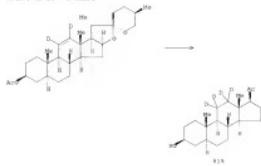
R2(18) OF 34 - 3 STEPS



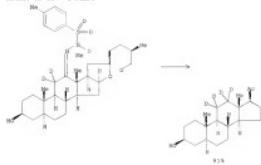
R2(18) OF 34 - 4 STEPS



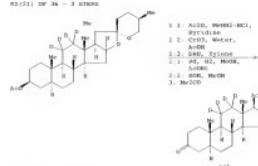
1A ANSWER 31 OF 39 CHASRACT. COPYRIGHT 2008 ACD/NS RTW (Continued)
RE(31) OF 34 - 3 STEPS



RE(31) OF 34 - 4 STEPS

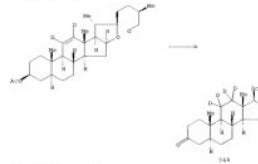


1A ANSWER 31 OF 39 CHASRACT. COPYRIGHT 2008 ACD/NS RTW (Continued)
RE(31) OF 34 - 3 STEPS



NOTE: 3) Jones reagent.

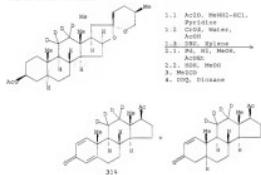
RE(31) OF 34 - 4 STEPS



NOTE: 4) Jones reagent.

1A ANSWER 32 OF 39 CHASRACT. COPYRIGHT 2008 ACD/NS RTW (Continued)

RE(34) OF 34 - 4 STEPS



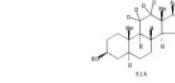
NOTE: 3) Jones reagent.

RE(35) OF 34 - 5 STEPS

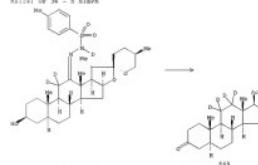


1A ANSWER 32 OF 39 CHASRACT. COPYRIGHT 2008 ACD/NS RTW (Continued)

RE(34) OF 34 - 5 STEPS

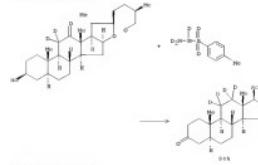


RE(34) OF 34 - 6 STEPS



NOTE: 3) Jones reagent.

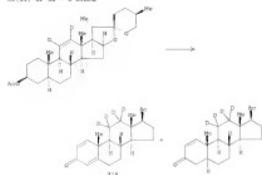
RE(35) OF 34 - 6 STEPS



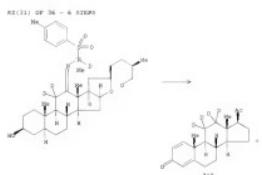
NOTE: 4) Jones reagent.

SAF ANSWER 32 OF 38 CINNABACT. COPYRIGHT 2008 ACD/NSR (Continued)

RI(32) OF 34 - 5 ATMS

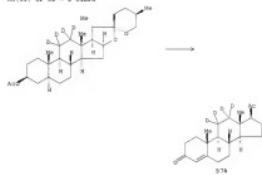


RI(32) OF 34 - 6 ATMS

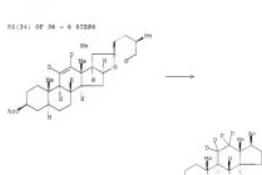


SAF ANSWER 32 OF 38 CINNABACT. COPYRIGHT 2008 ACD/NSR (Continued)

RI(32) OF 34 - 5 ATMS



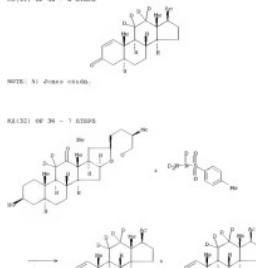
RI(34) OF 34 - 6 ATMS



RI(32) OF 34 - 7 ATMS

SAF ANSWER 32 OF 38 CINNABACT. COPYRIGHT 2008 ACD/NSR (Continued)

RI(32) OF 34 - 7 ATMS



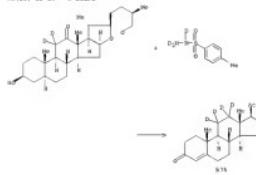
RI(32) OF 34 - 8 ATMS

SAF ANSWER 32 OF 38 CINNABACT. COPYRIGHT 2008 ACD/NSR (Continued)

RI(32) OF 34 - 8 ATMS



RI(34) OF 34 - 8 ATMS



RX(1) GF 14

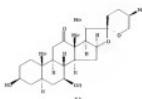
16 ANSWER 33 OF 38 CONTACT COPYRIGHT 2009 AOS on 629 (Continued)

Reaction of 14

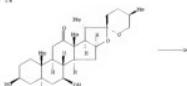
The diagram shows a steroid nucleus (14) with a cyclopentenone side chain at C14. An arrow points to the right, indicating the transformation to a new steroid structure (15), which has a different side chain at C14.

16 ANNUAL JR. JR. COMMERCIAL CONVENTION 2008 FEB 08-10 HOTEL MARRIOTT

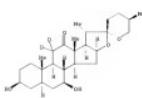
RECEIVED



热泵(3) ◎P 34

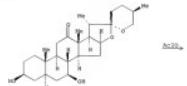


第 16 章

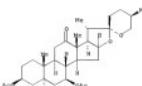


14 ANSWER 33 OF 34 CASEFACT COPYRIGHT 2008 AOS on STW (Continued)

第2(6)章P. 14



第2(6)章第14

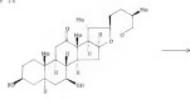


第 3 章



14 ANSWER 12 OF 20 CHASRACT ©COPYRIGHT 2008 ACS OR STM (Continued)

R2(R) OF 14



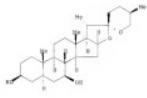
R2(R) OF 14



R2(R) OF 14

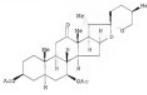


R2(R) OF 14

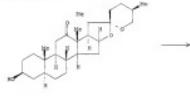


14 ANSWER 13 OF 20 CHASRACT ©COPYRIGHT 2008 ACS OR STM (Continued)

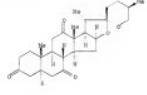
R2(11) OF 14 - 2 STEPS



R2(11) OF 14 - 2 STEPS



R2(11) OF 14 - 2 STEPS

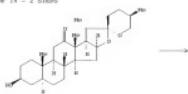


R2(11) OF 14 - 2 STEPS

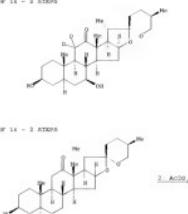


14 ANSWER 13 OF 20 CHASRACT ©COPYRIGHT 2008 ACS OR STM (Continued)

R2(10) OF 14 - 2 STEPS

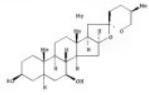


R2(11) OF 14 - 2 STEPS

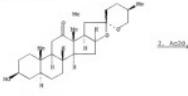


14 ANSWER 13 OF 20 CHASRACT ©COPYRIGHT 2008 ACS OR STM (Continued)

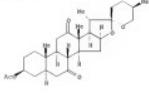
R2(11) OF 14 - 2 STEPS



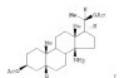
R2(11) OF 14 - 2 STEPS



R2(11) OF 14 - 2 STEPS



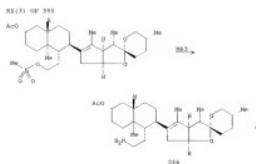
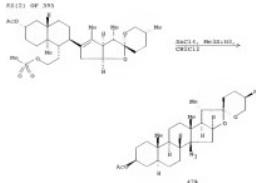
LA ASIMEN 34 OF 38 CASREACT COPYRIGHT 2008 ACS ON STN
 AS 111-3048-0 CASREACT
 TA: Synthesis of a 14 β -amino function into a steroid nucleus
 Application to the neuroactive 14 β -amino-18 α -propanoic acid
 Derivatives of Steroids. Part 1. 14 β -Amino-18 α -Acetoxy-18 α -Hydroxy-18 α -Propanoic Acid
 David, B.; Carpenter, B.; Mouloua, A.; Charente, A.; Roche, C.
 J. Am. Chem. Soc. 1967, 89, 11900-11904
 DOI: 10.1021/ja01013a030
 ISSN: 0002-7233
 Page: 11900-11904
 Author: French



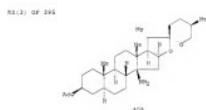
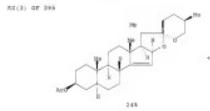
AB: We carried out studies for introducing a 14 β -amino function into a steroid with little manipulation of a 12,13-epoxy-18 α -steroid bearing a 13-methoxyl group in the presence of NaBH₄, NaBH(OAc)₃, or LiAlD₄. The results are summarized in Table I. This four-step method allowed the preparation of the neuroactive 14 β -amino-18 α -acetoxy-18 α -hydroxy-18 α -propanoic acid and its available steroids deacetoxy acid and propanoate.



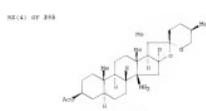
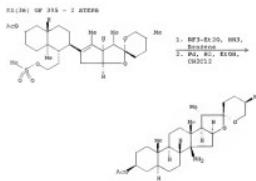
LA ASIMEN 34 OF 38 CASREACT COPYRIGHT 2008 ACS ON STN (Continued)



LA ASIMEN 34 OF 38 CASREACT COPYRIGHT 2008 ACS ON STN (Continued)

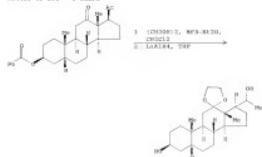


LA ASIMEN 34 OF 38 CASREACT COPYRIGHT 2008 ACS ON STN (Continued)

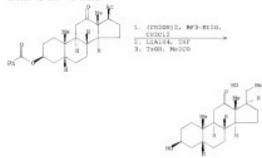


1A ANSWER 34 OF 38 CADREACT COPYRIGHT 2008 ACD/nn STR (Continued)

RI(41): OF 335 - 2 STERS

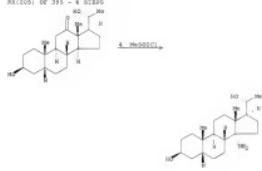


RI(41): OF 335 - 3 STERS



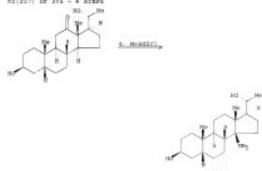
1A ANSWER 34 OF 38 CADREACT COPYRIGHT 2008 ACD/nn STR (Continued)

RI(205): OF 335 - 5 STERS



RI(205): 2) photolysis

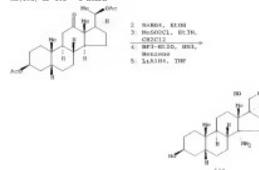
RI(207): OF 335 - 6 STERS



RI(207): 2) photolysis

1A ANSWER 34 OF 38 CADREACT COPYRIGHT 2008 ACD/nn STR (Continued)

RI(195): OF 335 - 5 STERS



RI(195): 2) photolysis

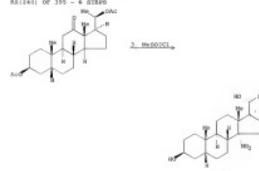
RI(197): OF 335 - 6 STERS



RI(197): 2) photolysis

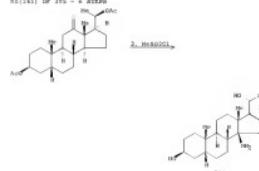
1A ANSWER 34 OF 38 CADREACT COPYRIGHT 2008 ACD/nn STR (Continued)

RI(244): OF 335 - 6 STERS



RI(244): 2) photolysis

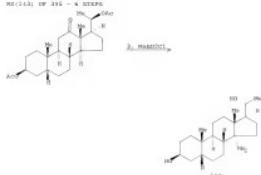
RI(244): OF 335 - 6 STERS



RI(244): 2) photolysis

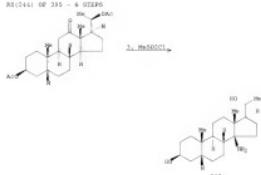
1A ANNEE 34 OF 38 CHIMIACT - COPYRIGHT 2008 ACD/NS RTW (Continued)

RI(144) OF 315 - 6 STEPS



NOTE: 1) photocleav.

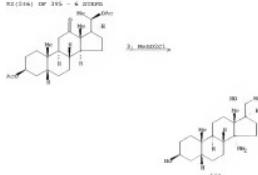
RI(144) OF 315 - 6 STEPS



NOTE: 1) photocleav.

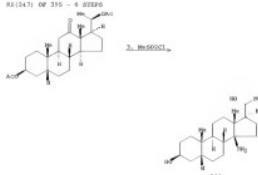
1A ANNEE 34 OF 38 CHIMIACT - COPYRIGHT 2008 ACD/NS RTW (Continued)

RI(144) OF 315 - 6 STEPS



NOTE: 1) photocleav.

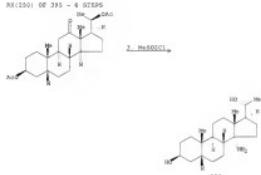
RI(144) OF 315 - 6 STEPS



NOTE: 1) photocleav.

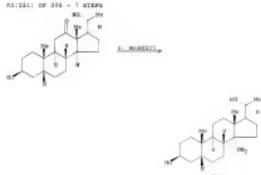
1A ANNEE 34 OF 38 CHIMIACT - COPYRIGHT 2008 ACD/NS RTW (Continued)

RI(150) OF 315 - 6 STEPS



NOTE: 1) photocleav.

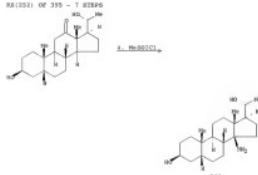
RI(144) OF 315 - 7 STEPS



NOTE: 1) photocleav.

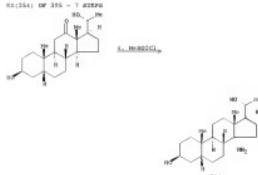
1A ANNEE 34 OF 38 CHIMIACT - COPYRIGHT 2008 ACD/NS RTW (Continued)

RI(151) OF 315 - 7 STEPS



NOTE: 1) photocleav.

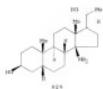
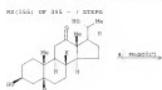
RI(154) OF 315 - 7 STEPS



NOTE: 1) photocleav.

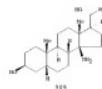
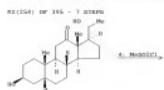
SAE ANSWER 34 OF 38 CINNACT - COPYRIGHT 2009 ACD/Labs INC.

(Continued)



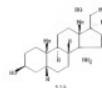
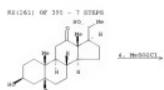
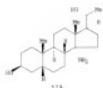
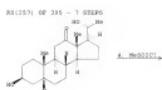
SAE ANSWER 34 OF 38 CINNACT - COPYRIGHT 2009 ACD/Labs INC.

(Continued)



NOTE: 2) photolysis.

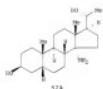
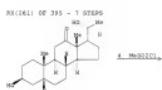
NOTE: 2) photolysis.



NOTE: 2) photolysis.

SAE ANSWER 34 OF 38 CINNACT - COPYRIGHT 2009 ACD/Labs INC.

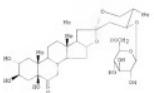
(Continued)



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-> d bib abs crd 35-

(Point 2, Cont'd.)



A3 A new steroid glycoside of the sapogenin series, anururostane (I), was isolated from the title *Allium* species; enzymic cleavage of I gave the native genin, anurangene (2, III). The structures of I and II were confirmed by NMR spectroscopy, derivatization, and other phys.-chemical means.

MECH OF 1

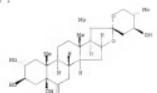


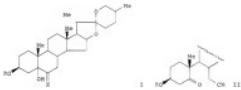
FIGURE GE-1



18 ANSWER 18 OF 18 - CONTRACT - DO NOT EDIT

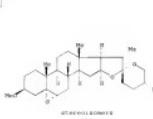
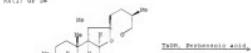
42

30



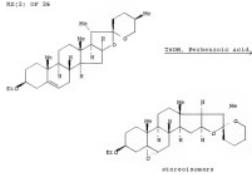
AB The Bischler reaction of title spirostanes I ($R = Me$, Et; $X = O$) with $HgCl_2/HgCl_2O$ gave also nitrolic II. The Beckmann rearrangement of oximes I ($R = Me$, Et, $X = NHOH$) also gave II.

PAGE 10

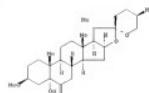


14 ANSWER 26 OF 26 CRACKACT. Copyright 2008 AGS Inc. All rights reserved.

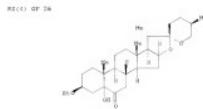
200



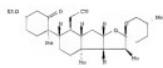
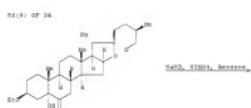
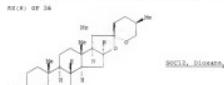
卷之三



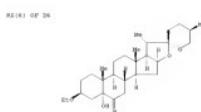
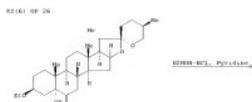
1A ANSWER 34 OF 38 Cengage Learning 2008 ACD on STM (Continued)



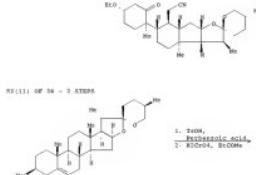
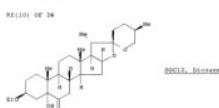
1A ANSWER 34 OF 38 Cengage Learning 2008 ACD on STM (Continued)



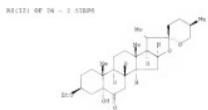
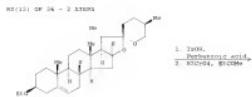
1A ANSWER 34 OF 38 Cengage Learning 2008 ACD on STM (Continued)



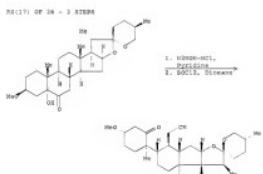
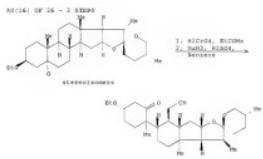
1A ANSWER 34 OF 38 Cengage Learning 2008 ACD on STM (Continued)



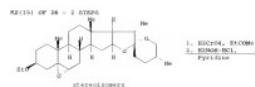
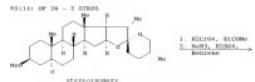
SA ANSWER 24 OF 28 CHMRACT. COPYRIGHT 2008 ACD/NSR (Continued)



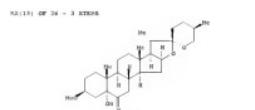
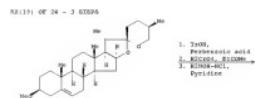
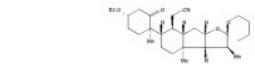
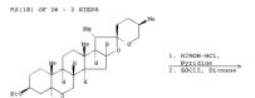
SA ANSWER 24 OF 28 CHMRACT. COPYRIGHT 2008 ACD/NSR (Continued)



SA ANSWER 24 OF 28 CHMRACT. COPYRIGHT 2008 ACD/NSR (Continued)

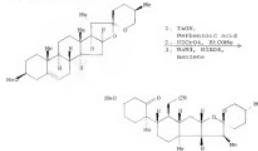


SA ANSWER 24 OF 28 CHMRACT. COPYRIGHT 2008 ACD/NSR (Continued)



1A ANSWER 24 OF 28 CHAIKACT. COPYRIGHT 2008 ACS on STM (Continued)

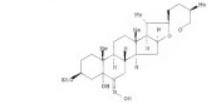
R2(31) OF 24 - 3 STEPS



R2(31) OF 24 - 3 STEPS



R2(31) OF 24 - 3 STEPS

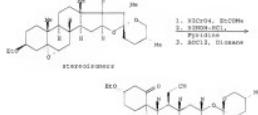


1A ANSWER 24 OF 28 CHAIKACT. COPYRIGHT 2008 ACS on STM (Continued)

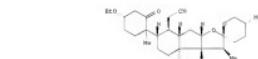
R2(24) OF 24 - 4 STEPS



R2(24) OF 24 - 3 STEPS

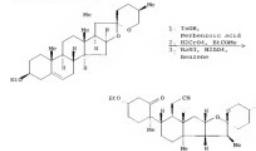


STEREOLISOMER

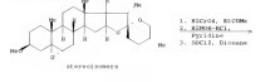


1A ANSWER 24 OF 28 CHAIKACT. COPYRIGHT 2008 ACS on STM (Continued)

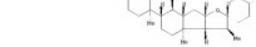
R2(32) OF 24 - 3 STEPS



R2(32) OF 24 - 3 STEPS



STEREOLISOMER



1A ANSWER 24 OF 28 CHAIKACT. COPYRIGHT 2008 ACS on STM (Continued)

R2(24) OF 24 - 4 STEPS



STEREOLISOMER



STEREOLISOMER



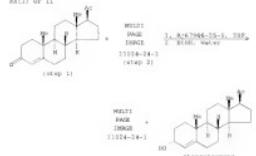
16 ABREU J / P OF IR CASREACT EXPIRED 2008 APR 06 ATC
1051153162 CASREACT
17 Synthesis of the allylic gonadal steroids, 3 α -hydroxy-5-pregnene-21-one and 5 α -hydroxy-5-androstan-17-one, and of 5 β -hydroxy-5-pregnene-20-one.

A2 Niels, P. J. & Dulce, C. J. *Biochemistry*, 9, 2141-2146, 1990.
 A3 Niles, P. J. *J. Am. Oil Chemists' Soc.*, 67, 1201-1204, 1990.
 A4 Niles, P. J. *Journal of Lipid Research*, 31, 1329-1338, 1990.

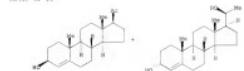
BT Journal
 A5 *Journal of Lipid Research*

A6 The recently isolated allylic glandular sterols, 2-hydroxy-4-propen-3-one (*I*) and 2-hydroxy-4-*trans*-3-penten-3-one (*II*) were prepared using previously described methods. *I* was reduced with NaBH₄ in the presence of tris(2-ethylhexyl) phosphite as a reducing agent. Similar reactions were also employed for the reduction of 3-*propenyl*-3,5-dihydro-5-hydroxy-4-pentaenyl acetate (*III*). The yields were about 60% for *I* and 40% for *III*.
 A7 *III* was converted to the corresponding epoxide by treatment with molar quantities of the Na-oximes and the Na-epimer, formed in 50% yield.

ISSN 0833-3350

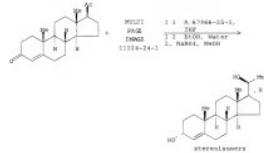


202(2) GF 11



38 ANSWER 37 OF 38 CONTACT COPYRIGHT 2008 AOS on 579 (Continued)

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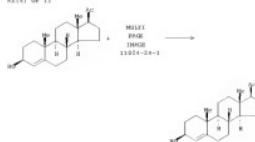


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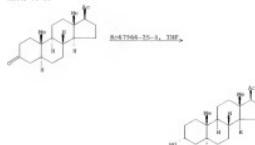


16 Annex 12 or 18 COMMISSION REGULATION (EU) No 223

西(1) 87

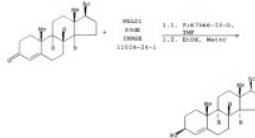


高教《新编》◎哲 2

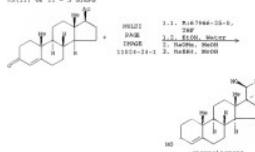


34 ANSWER 37 OF 38 OASMEACT OASMEIGHT 2008 AOS-on-STR (Cont.)

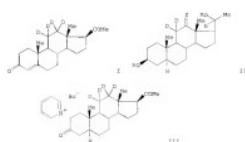
ANSWER



SIAM J. SCI. COMPUT., VOL. 33, NO. 3, 2011

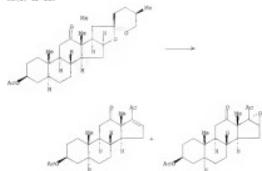


1A ANSWER 3B OF 3B CINFRACT COPYRIGHT 2008 ACD LAB SWN
 1B 1374583
 1C Synthesis of 11,12,13,15-tetrahydrocyclopentenone
 1D Salnikovskaya, E. K.; Pavlovskii, V. N.
 1E Khim. Sistem. Anal. (Kiev), 1986, 12(1), 55-60
 1F Zhurnal Organicheskoi Khimii, 1986, 12(1), 637-640
 1G Journal Organic Analysis, 1986, 12(1), 637-640
 1H Journal
 1I Russian
 1J G1



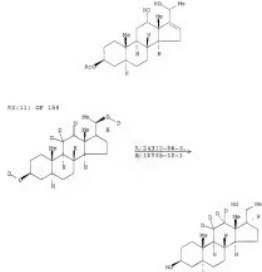
AB The tetrahydrocyclopentenone I was prepared from hexacene acetate. Key steps included NaBH₄/MeOH reduction of one diol II ($M = H$) $I = A$ to give II ($M = H$) $I = B$, and pyridine elimination reaction of pyridinium salt III ($M = H$) $I = C$ to give I.

RS(I) OF 153

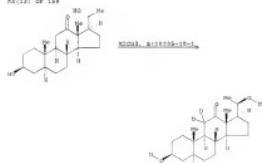


1A ANSWER 3B OF 3B CINFRACT COPYRIGHT 2008 ACD LAB SWN (Continued)

RS(II) OF 153



RS(III) OF 153

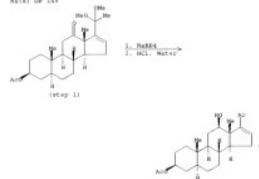


1A ANSWER 3B OF 3B CINFRACT COPYRIGHT 2008 ACD LAB SWN (Continued)

RS(IV) OF 153

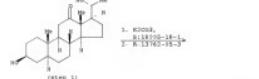


RS(V) OF 153



1A ANSWER 3B OF 3B CINFRACT COPYRIGHT 2008 ACD LAB SWN (Continued)

RS(VI) OF 153

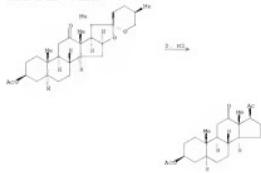


RS(X) OF 153

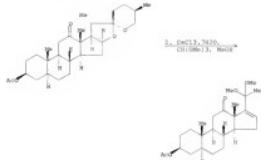


SA ANSWER 38 OF 38 CINNAPACT COPYRIGHT 2009 ACD/NSR (Continued)

RI(24) OF 159 - 2 STEPS

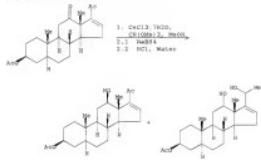


RI(25) OF 159 - 2 STEPS

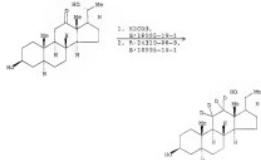


SA ANSWER 38 OF 38 CINNAPACT COPYRIGHT 2009 ACD/NSR (Continued)

RI(26) OF 159 - 2 STEPS



RI(28) OF 159 - 2 STEPS



SA ANSWER 38 OF 38 CINNAPACT COPYRIGHT 2009 ACD/NSR (Continued)

RI(29) OF 159 - 2 STEPS



RI(30) OF 159 - 2 STEPS

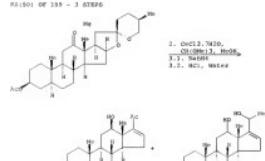


SA ANSWER 38 OF 38 CINNAPACT COPYRIGHT 2009 ACD/NSR (Continued)

RI(31) OF 159 - 2 STEPS

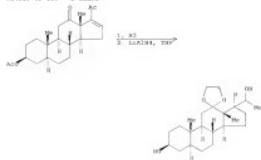


RI(32) OF 159 - 2 STEPS



1A. ASIMON 3B OF 3B CINPHACT. COPYRIGHT 2008 ACD/NSN (Continued)

RI(51) OF 159 - 3 STEPS



1A. ASIMON 3B OF 3B CINPHACT. COPYRIGHT 2008 ACD/NSN (Continued)

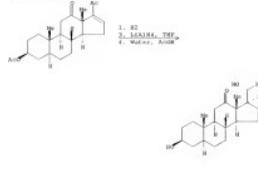
RI(52) OF 159 - 3 STEPS



RI(53) OF 159 - 4 STEPS

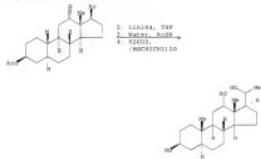


RI(54) OF 159 - 4 STEPS



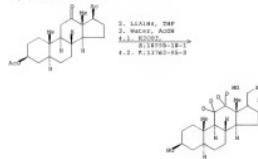
1A. ASIMON 3B OF 3B CINPHACT. COPYRIGHT 2008 ACD/NSN (Continued)

RI(44) OF 159 - 3 STEPS

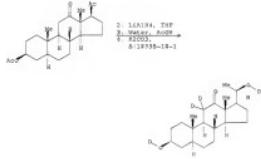


1A. ASIMON 3B OF 3B CINPHACT. COPYRIGHT 2008 ACD/NSN (Continued)

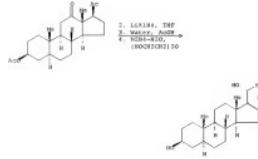
RI(44) OF 159 - 4 STEPS



RI(45) OF 159 - 4 STEPS



RI(45) OF 159 - 4 STEPS

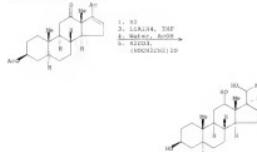


1A. ASSEMBLY 3B OF 3B CAMPACTIN COMPACTIN 2008 ACD on STW (Continued)

RI(42) OF 153 - 3 STEPS

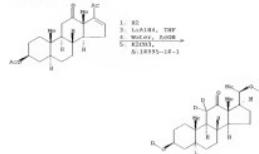


RI(42) OF 154 - 5 STEPS



1A. ASSEMBLY 3B OF 3B CAMPACTIN COMPACTIN 2008 ACD on STW (Continued)

RI(51) OF 157 - 3 STEPS

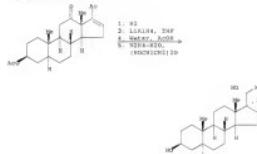


RI(51) OF 155 - 5 STEPS



1A. ASSEMBLY 3B OF 3B CAMPACTIN COMPACTIN 2008 ACD on STW (Continued)

RI(42) OF 153 - 3 STEPS



RI(41) OF 153 - 0 STEPS



1A. ASSEMBLY 3B OF 3B CAMPACTIN COMPACTIN 2008 ACD on STW (Continued)

RI(49) OF 157 - 4 STEPS

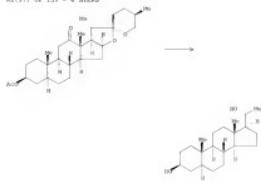


RI(49) OF 155 - 4 STEPS

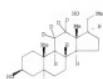


SA. ASSEMBLY 28 OF 28. CHAINACT. COPYRIGHT 2009 ACD/ON STW. (Continued)

RE(17): OF 139 - 4 STEPS



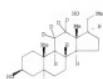
1. LiAlD₄, THF
2. NaBH₄, AcOH
3. 213995-14-1
4. 213995-14-1
5. 213995-14-1



RE(18): OF 139 - 5 STEPS

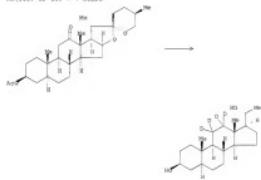


1. LiAlD₄, THF
2. NaBH₄, AcOH
3. 213995-14-1
4. 213995-14-1
5. 213995-14-1

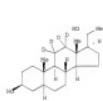


SA. ASSEMBLY 28 OF 28. CHAINACT. COPYRIGHT 2009 ACD/ON STW. (Continued)

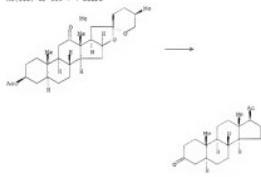
RE(19): OF 139 - 7 STEPS



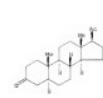
1. LiAlD₄, THF
2. NaBH₄, AcOH
3. 213995-14-1
4. 213995-14-1
5. 213995-14-1
6. 213995-14-1
7. 213995-14-1



RE(20): OF 139 - 7 STEPS

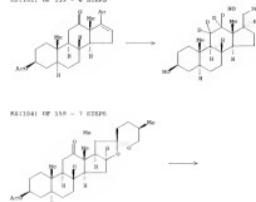


1. LiAlD₄, THF
2. NaBH₄, AcOH
3. 213995-14-1
4. 213995-14-1
5. 213995-14-1
6. 213995-14-1
7. 213995-14-1

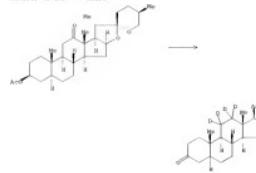


SA. ASSEMBLY 28 OF 28. CHAINACT. COPYRIGHT 2009 ACD/ON STW. (Continued)

RE(21): OF 139 - 6 STEPS

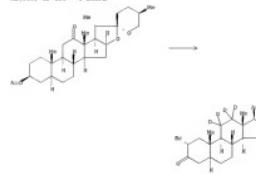


RE(22): OF 139 - 7 STEPS

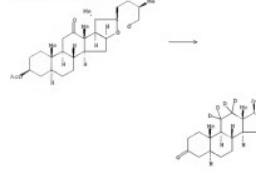


SA. ASSEMBLY 28 OF 28. CHAINACT. COPYRIGHT 2009 ACD/ON STW. (Continued)

RE(23): OF 139 - 8 STEPS

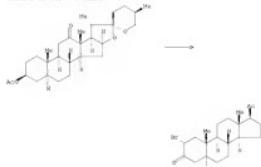


RE(24): OF 139 - 8 STEPS

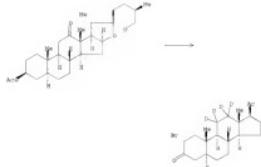


SA ADDENDUM 3B OF 2B CHMTRACT COPYRIGHT 2008 ACH on STM (Continued)

RE(114) OF 159 ~ 8 STEPS

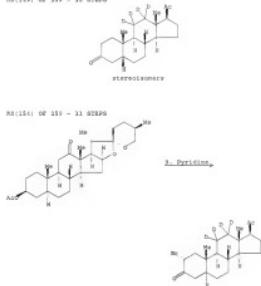


RE(114A) OF 159 ~ 8 STEPS



SA ADDENDUM 3B OF 2B CHMTRACT COPYRIGHT 2008 ACH on STM (Continued)

RE(114) OF 159 ~ 10 STEPS

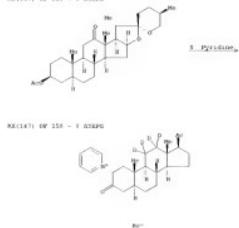


RE(114) OF 159 ~ 11 STEPS



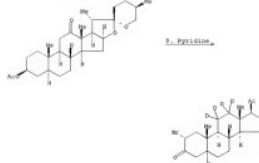
SA ADDENDUM 3B OF 2B CHMTRACT COPYRIGHT 2008 ACH on STM (Continued)

RE(114) OF 159 ~ 9 STEPS



SA ADDENDUM 3B OF 2B CHMTRACT COPYRIGHT 2008 ACH on STM (Continued)

RE(114) OF 159 ~ 10 STEPS



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